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Triennale
Mauritius | 19–21 October **2022**

GENERAL
SYNTHESIS
REPORT

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

REPUBLIC OF MAURITIUS
Ministry of Education, Tertiary Education,
Science and Technology

ADEA 2022 Triennale

"Reflecting on the impact of COVID-19 on Africa's educational systems, and how to build resilience to sustain the development of skills for the continent and beyond."

GENERAL SYNTHESIS REPORT

Le Méridien Ile Maurice
Village Hall Lane, Pointe aux Piments 21304
Mauritius

19th – 21st October 2022

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ACRONYMS

ACA	African Curriculum Association
ACEs	Africa Higher Education Centres of Excellence
ACQF	African Continental Qualifications Framework
ACU	Association of Commonwealth Universities
ADEA	Association for the Development of Education in Africa
AEDPI	Africa Economic Development Policy Initiative
Acta	African Continental Free Trade Area
AFD	Agence Française de Développement
AfDB	African Development Bank
AIDS	Acquired Immune Deficiency Syndrome
APHRC	African Population and Health Research Center
AU	African Union
AUC	African Union Commission
AUDA-NEPAD	AU Development Agency- New Partnership for Africa's Development
BEAR	Better Education for Africa's Rise
CESA	Continental Education Strategy for Africa
CHOGM	Commonwealth Heads of Government Meeting
CIEFFA	International Center for Girls' and Women's Education of the African Union
CONFEMEN	Conference of Ministers of Education of French-speaking States and Governments
CSOs	Civil Society Organizations
CTA	Commitment to Action
DHS4E	District Health System for Education
DTSfA	Digital Transformation Strategy for Africa
ECE	Early Childhood Education
EDC	Education Development Center
EdTech	Education Technology
ESSA	Education Sub-Saharan Africa
EMIS	Education Management Information Systems
EU	European Union
FAWE	Forum for African Women Educationalists
FILL	Family and Intergenerational Literacy and Learning

FinCEED	Finnish Centre of expertise in Education and Development
GDP	Gross Domestic Product
GEMR	Global Education Monitoring Report
GIZ/BMZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ)
GPE	Global Partnership for Education
GRP	Gender Responsive Pedagogy
HCA	Human Capital Africa
HE	Higher Education
HEIs	Higher Education Institutions
HESR	Higher Education and Scientific Research
HQ	Headquarters
ICQN	Inter-Country Quality Node
ICT	Information and Communication Technology
IDRC	International Development Research Center
IFADEM	Initiative francophone pour la formation à distance des maîtres
IFEF	Institut de la Francophonie pour l'éducation et la formation
IICBA	International Institute for Capacity Building in Africa
IIEP	International Institute for Educational Planning
ILO	International Labour Organization
IPED	Pan-African Institute of Education for Development
IsDB	Islamic Development Bank
JICA	Japan International Cooperation Agency
KIX	Knowledge and Information Exchange
LEARN	Leveraging Education Analysis for Results Network
M&E	Monitoring and Evaluation
MOOCS	Massive Open Online Courses
NSDS	National Strategy for the Development of Statistics
PAL	People's Action for Learning
PAPSE	Projet d'amélioration de la prestation des services éducatifs
PASEC	Programme d'analyse des systèmes éducatifs de la CONFEMEN
PASET	Partnership for skills in Applied Sciences, Engineering and Technology
PhD	Doctor of Philosophy

PISA	Programme for International Student Assessment
R&D	Research and Development
ROK	Republic of Korea
SACMEQ	Southern and Eastern Consortium for Monitoring Education Quality
SDG4	Sustainable Development Goal 4
STC-ESTI	Specialized Technical Committee on Education, Science, Technology, and Innovation
STEM	Science, Technology, Engineering, and Mathematics
TaRL	Teaching at the Right Level
TES	Transforming Education Summit
TIMMS	Trends in International Mathematics and Science Study
TL	Teaching and Learning
TV	Television
TVET	Technical and Vocational Education and Training
TVSD	Technical and Vocational Skills Development
UIL	UNESCO Institute for Learning
UIS	UNESCO Institute for Statistics
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	Unite National Children's Fund
USAID	United States Agency for International Development
21CCEM	21st Conference of Commonwealth Education Ministers
4IR	Fourth Industrial Revolution

EXECUTIVE SUMMARY

Introduction:

The Association for the Development of Education in Africa (ADEA) successfully organized the 3rd edition of its Triennale with the Government of Mauritius through the Ministry of Education, Tertiary Education, Science and Technology. The overall goal of this seminal event was to take stock, learn and share fruitful experiences on the impact of the COVID-19 pandemic on education and to identify, and collectively commit to develop, the necessary drivers and conditions to enhance the resilience of Africa's education systems for skills development. Le Meridien Hotel hosted the event from 19th to 21st October 2022 under the overall theme, *"Reflecting on the impact of COVID-19 on Africa's educational systems, and how to build resilience to sustain the development of skills for the continent and beyond."*

More than 800 in-person and virtual participants that included 12 Ministers in charge of the different education sub-sectors, national heads of delegations, regional and continental organizations, and partner CEOs and high-level representatives participated in the event.

The following four sub-themes and three cross-cutting themes unpacked the main theme:

Sub-themes	Cross-cutting themes
1. The impact of COVID-19 on Africa's Educational Systems.	1. Tackling the education and skills data challenge in Africa.
2. Improving foundational literacy and numeracy and social and emotional learning.	2. The use of ICT for education while leveraging digitalization and EdTech.
3. Remodelling Technical and Vocational Skills Development (TVSD) considering digitalization.	3. Improving access and equity in providing quality education for vulnerable groups.
4. Reimagining Africa's Higher Education and Scientific Research.	

Key education partners, including AFD, African Development Bank, Bill and Melinda Gates Foundation, GPE KIX, Islamic Development Bank, LEGO Foundation, Mastercard Foundation, UNESCO, and USAID supported the Triennale.

Hon. Mrs Leela Devi Dookun-Luchoomun, Vice Prime Minister and Minister of Education, Tertiary Education, Science and Technology of Mauritius officially opened the Triennale. Hon. Dr Monica Musenero, Minister of Science, Technology and Innovation in Uganda made the opening remarks. She is also the Chairperson of the Bureau of Specialized Technical Committee on Education, Science, Technology, and Innovation of the African Union (AU STC-ESTI Bureau) and the Chairperson of the ADEA Steering Committee. Solidarity messages from key development partners enriched the official opening while Hon. Prof. Mariatou Koné, Minister of National Education and Literacy of Côte d'Ivoire gave the keynote speech on the topic "Africa and COVID-19: It's time to build back better and more resilient educational systems".

Several partner side meetings, exhibitions, plenary engagements that included the Ministerial and CEOs roundtable, and the renewed outcomes of the 2022 Transforming Education Summit (TES) informed the discussions at the Triennale and contributed to its overall success.

Discussion highlights:

The COVID-19 pandemic brought to the fore the imperative for proactive forward planning with crisis situations in mind. This follows the disastrous impact of the pandemic on access, relevance, and quality of education, especially for learners in disadvantaged and vulnerable situations and those with special education needs.

Africa continues to face unprecedented challenges in foundational learning, with low reading and mathematics levels in primary schools.

Regarding TVSD, quality data is imperative, innovative, and disruptive technologies have become a way of life and work, entrepreneurship promotion is a complex endeavour and private sector partnership is key in consolidating competency-based training to ensure relevance of skills learnt.

While there is increased goodwill among member states to dialogue about policy, programming, and practice in higher education; and to collaborate to mediate funds deficits and improve the conduct of research, the focus on infrastructure development alone while not prioritizing research and development can slow down existing efforts aimed at collaborative sharing of scientific findings, especially based on the COVID-19 experience.

There is great value in making decisions that are well-informed by evidence, hence the need for quality data. Areas requiring the use of EdTech need to be prioritized, and contextualized, in the digitalization and targeting of interventions to improve access and equity in education while intentionally bringing in the gender and disability impacts of policies to ensure no one is left behind.

Key recommendations:

1. **Impact of COVID-19 on Africa's Educational Systems: Strengthening resilience to shocks and similar crises.**

   - **Build sustainable and resilient education systems that anticipate shocks and crises.** Develop functional contingency plans based on the African education context. Communicate the plans and subsequent modifications to the different actors and stakeholders within the system.

   - **Promote cross-learning and empower teachers.** Learning from each other and sharing of experiences were powerful in national mitigation planning for education. Also empower teachers and educators to be responsive, flexible to adapt, and to be innovative in finding solutions.

   - **Embrace a multi-sectoral approach.** Avoid silos-type planning and collaborate with other partners and sectors such as infrastructure, health, finance, and nutrition in a whole government approach.

- **Leverage community-based programs.** Complement the programs by modes of learning and e-learning. Use school-based management committees to supplement and expand what governments and development partners are doing at the grassroots level.

- **Initiate, where none exists, school re-entry programs, especially for girls,** in the wake of a disaster such as COVID-19 to ensure that learning does not stop abruptly.

- **Institutionalize mechanisms** that provide further support to staff and learners experiencing mental health issues.

- Work with young start-up entrepreneurs to develop innovative solutions.

2. **Improving the salience, accountability, and capacity in Foundational Learning[1] in Africa.**

- **Ensure the availability of accurate and accessible data to track progress on the foundational learning commitments.** Promote the use of existing tools, engage in intra- and inter-country policy and programming dialogue, and involve citizens, parents, and communities in the assessment and remediation process and in monitoring the progress of foundational learning.

- Make the application of the principles of structured pedagogy a top education priority to sustain or surpass the gains made in foundational learning. Embrace the principles of successful structured pedagogy programs, including the daily use of structured resources, remediation systems, and assessment information to align instruction to the learning needs.

- Provide ongoing support to teachers to successfully shift from assessment of instruction to assessment for instruction, and to strengthen the capacity of teachers to support children's social and emotional learning and safeguard their wellbeing. Train teachers on how to embed assessment within instruction and to give on-the-spot feedback. Clarify their role in scaling structured pedagogy programs, and how to apply a system-wide approach in developing assessments to align what is being assessed with why.

- **Inculcate mutual accountability and partnerships to maintain the momentum generated at the Triennale.** Build on the unprecedented expression of solidarity at the Triennale to broker other partnerships. Reactivate and leverage existing peer learning mechanisms and communities of practice to take root among education stakeholders in addition to greater involvement of parents and communities.

3. **Rethinking Technical and Vocational Skills Development (TVSD) considering Digitalization and the Fourth Industrial Revolution.**

- Find alternative TVSD financing sources to supplement public funds and support apprenticeships. Build sustainable funding models through co-funding and joint ownership structures.

- Promote the application of EdTech solutions to learning crafts, to promote production quality. Change mindsets, improve the quality, and incorporate digital skills.

- Ensure that technical universities and polytechnics do not mimic traditional research universities and instead emphasize practice-oriented skills development and technological

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[1] Literacy, numeracy, and socio-emotional learning.

innovations. Provide a pathway for learners to acquire employment-oriented and entrepreneurial skills to the highest level possible.

- **Promote policy coherence by learning from policy failures.** Contextualize policy to the country's situation. To guard against conforming blindly to metrics designed by others for their purposes, embrace world standards with the African spirit and country specificities.

- **Prioritize training of trainers, especially in industry or externships**, and implement continuous development programs to promote upskilling, reskilling, and multiskilling.

- **Change the perception of TVSD.** Improve the quality of TVSD provision to attract high performing students. Prioritize its functionality and utility, promote the portability of skill sets and micro-credentials, and inter- and intra-differentiation instead of only vertical differentiation.

- Avoid the narrow job specification training and embrace new forms of work-integrated training. Form partnerships and conduct benchmarking with African TVET/TVSD institutions.

- Forge partnerships with the private sector to consolidate competency-based training to ensure relevance of the skills learnt. Adopt a win-win approach with benefits for both firms (such as tax discounts) and learners (acquisition of workplace skills).

- **Highlight the importance, and use, of data in the diagnosis of TVSD challenges**. Lack of data and research evidence is a serious challenge facing the development and modernization of TVSD.

- **Establish a Continental TVSD Think Tank** to support the revitalization of TVET in Africa, under the leadership of Mauritius.

4. **Reimagining Higher Education and Scientific Research in Africa.**

- **Innovate on funding options for research in higher education to inform policy, programming, and practice.** Promote endogenous funding for a better match between research and development. Target available domestic funding and mobilize donor funding for research. Develop mechanisms that encourage inter-university exchange and for universities and industries to benefit from each other.

- Strengthen the capacity of higher education personnel to undertake robust research and implement programs for skills development for Africa. Nurture and manage robust, collaborative higher education research for impact, built on trust and mutual benefit. Promote collaborative publication while guarding against unregulated massification of publications from universities to ensure quality and accountability.

- **Encourage strategic partnerships between universities and other higher education institutions (HEIs) in Africa.** Promote opportunity oriented HEIs and TVSDs. Accelerate blue, green, and digital transition as well as the growth of jobs in human development.

- Maintain strategic peer learning opportunities and mainstream the use of data and evidence for decision making in higher education.

- **Continue to improve the quality assurance and harmonization of qualifications** to enhance free labour and skills movement, while contributing to the transparency of qualifications and trust between African qualifications frameworks.

5. **Tackling the data challenge in Africa's educational systems.**

- **Shift from the traditional discourse to the economics of data.** Move beyond the value of having data and focus on people who can use the data, such as schools.

- **Develop innovative ways of working with policy and decision makers in other Ministries**, such as Finance, to earmark more funding to improve the use of quality data for advancing education and skills.

- **Strengthen the capacity of relevant units within Ministries**, beyond the training, through peer learning, exchange of knowledge and experiences and report back sessions for the events in which the staff participate.

- **Institutionalize actions on data for sustainability and resilience, while being cognizant of the different country contexts**. Push for the incorporation of programs that support the provision of education and skills data as part of the national budget and institutionalize capacity strengthening programs for education institutions and national assessment systems.

- **Employ a multi-sectoral approach in addressing the fragmented collection and holding of data.** Develop long-term strategies and communication plans or strengthen existing ones. Incentivize data collection and sharing through leveraging the collective wisdom of all stakeholders and building a community of practice.

6. **Embracing digitalization to improve the sustainable delivery of education and training in Africa.**

- Focus more on the education dimension when formulating policies and designing or implementing educational technology initiatives and link to learning outcomes. This will help focusing how we approach digital technology in our context on how it can help achieve educational policy goals and objectives.

- Harness knowledge about grass-roots innovations leveraging technologies to achieve educational goals that are more relevant to many contexts across the continent. Identify local solutions that can be scaled, and develop scaling strategies, to accelerate relevant deployment of digital technology.

- **Adopt an ecosystem approach in EdTech** to drive resilient and sustainable deployment of technologies and **embrace an inclusive approach** for all stakeholders to build the digital education ecosystem.

- Leverage available technologies to move beyond the digital skilling of teachers and help develop teachers as leaders that can drive the meaningful deployment of digital technology in schools and communities.

- **Provide dedicated investments in digital transformation and infrastructure.** Learn from existing models of continued education for teachers, and benchmark toolkits and maturity models to facilitate the focus on specificities of countries with respect to education development.

7. **Improving access and equity in education and training for vulnerable populations.**

- **Continuously review policies** in reference to global trends in education to remain relevant and **operationalize policies and document lessons** learnt to inform practice.

- **Design contextualized interventions** in reference to varied geographies and **involve participating recipients** to ensure effective implementation of projects or programs.

- **Build sustainable pedagogical interventions** through mentorship and shadow practices and **encourage the use of the Gender-Responsive Pedagogy (GRP) toolkit** for teachers, trainers, and leaders to facilitate access, equity, and quality education.

- **Use professional workers to sensitize communities** on the need to enrol children with disabilities in schools to enhance access.

Conclusion:

The ADEA 2022 Triennale reaffirmed the commitment to reform educational systems on the continent, after the COVID-19 pandemic experience, to be of better quality, aligned to the real needs of Africa, and more resilient to external shocks. The African Ministers of Education and Training, representatives from leading pan-African institutions and development partners restated their commitment and support for Africa's education to ensure the continent surmounts identified learning challenges, especially at the foundational level, technical and vocational skills development (TVSD), and in higher education and scientific research, considering the negative impact of COVID-19. The Ministers renewed their commitment to act on the outcomes of TES, and to implement the follow up recommendations from the ADEA 2022 Triennale. Uganda will host the next ADEA Triennale.

1. INTRODUCTION

The Association for the Development of Education in Africa (ADEA) is a critical voice and a forum for policy dialogue on education in Africa. The anticipated impact of ADEA's work is African countries that are empowered to develop education and training systems that respond to their current and emergent needs and drive Africa's social and economic transformation sustainably.

The Triennale on Education is ADEA's flagship event and one of Africa's seminal high-level forums for political dialogue and sharing of knowledge and fruitful experiences. It focuses on critical themes that transform Africa's educational systems for sustainable social and economic development.

Through the Triennale, ADEA fosters continental, regional and cross-country interactions, in support of peer learning and knowledge exchange. Linked to ADEA strategic planning process, the event provides a reflection of the past and shapes the future through forward-looking policy recommendations and stakeholder commitments.

ADEA organized the 3rd edition of its Triennale with the Government of Mauritius through the Ministry of Education, Tertiary Education, Science and Technology. Le Meridien Hotel hosted the event from 19th to 21st October 2022 under the overall theme, ***"Reflecting on the impact of COVID-19 on Africa's educational systems, and how to build resilience to sustain the development of skills for the continent and beyond."***

The overall goal of the 2022 Triennale was to take stock, learn and share fruitful experiences on the impact of the COVID-19 pandemic on education and to identify, and collectively commit to develop, the necessary drivers and conditions that promote a resilient education system for skills development. The following were the specific objectives and the expected outcomes:

Specific objectives

- Reflect on Africa's educational systems before and during the COVID-19 pandemic to inform building educational systems resilient to future crises.

- Promote knowledge and experience sharing on practical and innovative solutions for integrating digital technologies in teaching and learning, teacher professional development and remote education.

- Interrogate, validate, and adopt new/emerging trends in evidence, good practices and innovations that support the rebuilding of the future workforce in Africa through education.

- Identify and define strategies, tools, capacities, resources and other necessary factors for the operationalization and the successful implementation of forward-looking reforms.

- Build consensus, commitment, and partnerships among Ministries and other educational stakeholders in Africa for the implementation of the proposed reforms, aligned to the TES commitments.

Participants discussed and built consensus around a common forward-looking education and training agenda, focussing on the following four sub-themes, in line with the overall theme:

- The impact of COVID-19 on Africa's Educational Systems.

- Improving foundational literacy and numeracy and social and emotional learning.

- Remodelling Technical and Vocational Skills Development considering digitalization.

- Reimagining Africa's Higher Education and Scientific Research.

The Triennale also embraced three cross-cutting themes:

- Tackling the education and skills data challenge in Africa.

- The use of ICT for education while leveraging digitalization and EdTech.

- Improving access and equity in providing quality education for vulnerable groups.

The renewed commitments and Calls to Action from the 2022 Transforming Education Summit (TES) also informed the discussions at the Triennale and contributed to its overall outcomes and recommendations, aligned with the sub-themes and cross-cutting themes.

1.1. Background and context: post-Dakar 2017 – global and continental focus and the COVID-19 pandemic

The Transforming Education Summit (TES), held in September 2022 in New York in response to a global crisis in education, underscored the role of education in achieving the global Sustainable Development Goals and the goals of the continental frameworks such as Agenda 2063 through the Continental Education Strategy for Africa 2016-2025 (CESA 16-25). Linked to climate change crises, conflicts and poverty, global leaders - including African policymakers - and education stakeholders

called for mobilization of actions and resources, with greater accountability, to address the learning losses occasioned by the COVID-19 pandemic and innovatively transform education to be more resilient based on the pandemic's experience and to better prepare today's learners with knowledge and skills appropriate for a world in a rapidly changing trajectory.

The 130 countries present at TES committed to prioritize education and advancing gender equality through and in education, with nearly half focussing on addressing learning loss by boosting foundational learning, a third supporting the psycho-social well-being of both students and teachers, two-thirds referencing steps towards offsetting the "direct and indirect costs of education for economically vulnerable communities", three-quarters of the countries reiterating the importance of gender-sensitive education policies in the Calls to Action. Urging leaders to "act now", the youth advocates demanded in their Youth Declaration that "decision-makers include youth in education-related policy design and implementation, as partners and not just beneficiaries...[and] investment in youth leadership and in gender-transformative education" (UN, 2022).

Several initiatives have taken root at the level of the continent, impacting Africa's education either directly or indirectly, with some taking a global collaboration approach. They include the proposal for Education to be the Africa's theme for 2023, the African Continental Free Trade Area (AfCFTA), Africa CDC support on detection and rapid response to COVID-19 based on data-driven interventions, promotion of the blue and green economy, improving food security, digitalisation – particularly education technology or EdTech, and research for evidence and collaboration in joint tracking and reporting on the global and continental education frameworks (AU CESA 16-25 and SDG4).

The African Union Commission has proposed education to be the theme of the year 2023 for the continent, titled "Education, Learning and Skills Development: Building Resilient Systems for Increased Access to Inclusive Quality and Relevant Education in Africa" (Draft AU Concept Note, 2022). The proposed theme was one of the outcomes of to the high-level event on "Reimagining Education in Africa" held jointly with the European Union and UNICEF on the margins of the 76th United Nations General Assembly in September 2022. The 20 African Ministers of Education and key partners present concurred that this will fuel the momentum from TES and further strengthen the necessity for resilient education systems for the continent.

There has been good progress, and a demonstration of high-level political commitment to achieving market integration in Africa, in the operationalisation of AfCFTA. According to the latest progress report on the implementation of Agenda 2063 (AUC and AUDA-NEPAD, 2022), 54 countries have signed the AfCFTA Agreement, 42 have ratified it, and 39 have deposited their instruments of ratification. The critical role of the youth in the national and regional socio-economic development, anchored in AfCFTA, calls for renewed investments in the different levels of education and skills development, as part of the ongoing harmonization reforms in education linked to the regional integration efforts in Africa. The positive result (from 25% in 2019 to 44% in 2021) recorded in the performance of Goal No. 2 of Agenda 2063, of having well-educated citizens and a skills revolution underpinned by Science, Technology, and Innovation (AUC and AUDA-NEPAD, 2022), is an incentive for the continent, although much more remains to be fulfilled. One of the key recommendations, which requires a contribution from education, is to strengthen National Statistical Systems to ensure availability of data and information to regularly assess the continent's progress on the implementation of Agenda 2063.

The above recommendation on data availability applies to other areas and sectors as scarcity of quality data remains a big challenge in Africa, not only for monitoring education and skills indicators, but also in areas such as health, agriculture, marine and climate change. Initiatives responding to this recommendation include the Africa Spotlight report series linked to the AU peer learning mechanism, the joint CESA 16-25 and SDG4 collaborative efforts in the form of the indicators benchmarking initiative and the joint continental reporting need support, and the ADEA project on tackling the education and skills data challenge. The moderately low performance (39%) recorded in leveraging the blue economy for Africa's growth and development is partly due to skills deficit in this area, akin to the need to enhance skills in value addition for sectors such as agriculture and mining.

1.2. The 2022 Triennale: building resilient educational systems in Africa

- *Reflections on Africa's educational systems based on the COVID-19 experience:*

  Interventions that are likely to be impactful are those that are anchored on sound policies and strategies and backed by evidence. The interventions also need to be well-planned and resourced, efficiently executed, and effectively monitored and evaluated. The COVID-19 pandemic brought to the fore the inadequate level of preparedness, especially for the education sector. The policy and practice responses by African countries aimed at delivering education at home during the initial stages of the pandemic were largely reactionary as the knowledge about the pandemic continued to grow. Forward planning with crisis situations such as COVID-19 in mind is, therefore, imperative. ADEA's engagement with African countries at the policy and implementation levels on strategies for continuous learning, reopening of learning institutions, and the future's "new normal" based on the COVID-19 pandemic experience revealed valuable lessons. Among the key recommendations for the new education delivery model is a review of the overall policy and regulatory guidelines to mainstream digital technology, strengthening teacher professional development, exploring alternative funding models, and revisiting existing norms and standards. Among the ongoing initiatives is the development of toolkits that enable countries to benchmark their remote education systems and to institute necessary mitigation measures for effective and inclusive provision of education during crises. Equipped with a gender, equity and inclusion lens, the KIX Observatory on COVID-19 Responses in Educational Systems in Africa provides evidence from 40 GPE partner countries in Africa, on how governments quickly responded by changing policies and practices to mitigate the impact of the pandemic in terms of the continued operations of education and the well-being of learners beyond education.

- *Foundational Learning:*

  Achieving foundational literacy and numeracy is necessary for children to reach further learning levels as well as higher order skills for decent and fulfilling work. According to the World Bank, even before the COVID-19 pandemic, close to 90% of students in Sub-Saharan Africa could not read with comprehension by age 10. These low results are due to insufficient effective reading instruction happening in classrooms in most countries. Learning how to read is a complex and unnatural process that requires re-wiring the brain. It requires systematic evidence-based instruction and for students to be taught in a language they use and understand. This is not happening in many countries today. The COVID-19 pandemic and the consequent school closures it generated has only made this crisis worse. Evidence from countries like Kenya show that progress is possible in training teachers to improve their teaching practices at scale and improve student learning. Effective strategies include structured pedagogy – an approach to

support teachers that brings together structured lesson plans, teacher coaching and student materials, differentiated instruction tailored at the level of the student, and increasing instructional time to make up for all the classroom time that has been lost during the COVID-19 pandemic. Added to this is the need to focus on aspects of social and emotional learning, play-based STEM for early learning, and family literacy. Related to this are the costs involved and the required conditions, including the political economy. Strong political will is likely to bring the much-needed salience for foundational learning. If implemented well, these proven solutions may enable countries not only to recover from COVID-19 learning losses, but also make significant progress to improve literacy and numeracy outcomes for all by 2030 and contribute to achieving the goals of Agenda 2063: The Africa We Want.

- *Technical and Vocational Skills Development:*

  A holistic approach to skills development encompasses features such as continuous and seamless learning pathways; development of core and higher-level skills; transferability of skills and employability; and putting in place sustainable mitigating measures against unforeseen emergencies such as COVID-19. Common core skills, Technical and Vocational Skills Development (TVSD), and the acquisition of scientific and technological knowledge and skills are critical skill areas necessary for lifelong learning and accelerated and sustainable development in Africa. Although most of the challenges around skills development identified nearly 10 years ago remain, new dimensions have emerged. They include the advent of accelerated digitalization within 4IR (Fourth Industrial Revolution), renewed focus on TVSD, alternative financing models, and the COVID-19 pandemic. Interventions need to address several issues that impede the transformation of TVSD to better align the skills supplied with the skills demands of the labour market. One is blending of digital skills and 4IR to strengthen the integration of technology in traditional TVSD programmes. There is also inadequate financing and poor-quality training in public and private TVSD systems, including insufficient training and continuous professional development of TVET personnel. A third issue is the limited recognition/ accreditation of informal systems as part of dealing with the large numbers of unskilled out-of-school youth. Lastly is the issue of expanding access to vocational skills development in remote or disadvantaged areas to support improved livelihoods and poverty alleviation, a move that is strongly linked to having adequate funding.

- *Reimagining Africa's Higher Education and Scientific Research:*

  Africa's development hinges on a higher education system and research that plays a key role in knowledge-based economic growth strategies, contributes to the constitution of human capital, supports innovation, and validates scientific knowledge. Although some countries have adopted higher education governance structures and initiated innovations in training (university, vocational) with quality diversification, there is a clear case of insufficiency in these efforts. This deficit is linked to financing methods and limitation and, above all, lack of effectiveness and efficiency in the use of resources. Research remains poor, as a priority, in the policies of many African countries, with infrastructure, equipment, personnel, and funding having greater focus. Africa's contribution in the diagnosis and research of vaccines against the COVID-19 pandemic was comparatively minimal, accounting to only 1% of the results of research in the world, according to the World Bank (2020). In addition, there is a mismatch between existing research and potential areas of needs where the research results can be applied. For example, there is little research conducted in the continent in fields of STEM, accounting for only 29% of scientific research in sub-Saharan Africa (World Bank, 2014). Africa must improve the governance of

national research, promote African-led research, and adapt the research results to meet its needs and priorities. Developing the right policies for national research systems, ensuring they have the right capacity and capabilities for coordination and collaboration are also key interventions. It is also important to identify innovative and alternative financing options that can be used to expand higher-level teaching and learning mechanisms. Partner involvement in this endeavour is key.

- *Cross-cutting themes:*

Initiatives that support data availability could be harnessed to demonstrate how countries use evidence and analysis to move systems, policies, and budgets in support of education. Leveraged effectively and efficiently, digitalization can promote data and evidence generation to inform such decision making. As part of supporting greater inclusivity of vulnerable populations, there is need to allocate more domestic resources to create sustainability in financing emergency responses and demonstrate how these address gender issues and enhance equity and inclusion in education. Additionally, governments need to engage with key partners to support major investments in education technology and remote learning infrastructure in hard-to-reach areas as well as in countries in transition. The well-being of children, especially girls and young women, encompasses several interlinked issues inside and outside the learning environment. As such, mitigating interventions require a holistic and multistakeholder approach involving governments and active partners, including the local communities, to be successful. They also need to be contextualized to the prevailing socio-cultural, socio-emotional, and socio-economic situations. As an example, governments should embrace actionable school continuation and re-entry policies and legal frameworks for teens who fall pregnant to adjust in the new normal and promote their re-entry back to school. This is in addition to preparing teachers to support vulnerable children and those affected by gender-based violence and mental health issues. Resources can also be provided to the youth to stimulate critical thinking, with greater focus on regions and communities where the youth have little or no access to the right digital tools.

1.3. Evidence informed stakeholder consultations shaped the issues discussed

The Triennale's preparation adopted a participatory approach and evidence-informed virtual discussions in the stakeholder consultations that included representatives from countries – including Ministers, Deputy Ministers, and Directors of Education – and key development partners for each of the sub-themes and cross-cutting themes. Interactions centred on the most pressing issues, relevant approaches and realistic expectations that culminated in a consensus on the concrete areas for the Triennale.

Sub-theme / Cross-cutting theme	No. of attendees
• The impact of COVID-19 on Africa's Educational Systems.	55
• Improving foundational literacy, numeracy, and social and emotional learning.	83
• Remodelling Technical and Vocational Skills Development considering digitalization.	51

• Reimagining Africa's Higher Education and Scientific Research.	47
• Tackling the education and skills data challenge in Africa.	60
• Use of ICT for education while leveraging digitalization and EdTech.	69
• Improving access and equity in providing quality education for vulnerable groups.	19
Research, studies, and piloting of tools:	
• Evidence-informed high-level policy dialogue forums on basic education, TVSD, and HESR	759
• Validation and uptake of results of the situational analysis of STEM education in 10 African countries	114
• Development, validation, and piloting of Remote Education Benchmarking Toolkits for basic education, TVSD, and HESR	62
• Dissemination and knowledge uptake of research and knowledge products from the KIX Observatory on COVID-19 Responses in Africa's Educational Systems	20
• African Policymaker Forums on Education Delivery (on EMIS, teacher training and support, digitization of curriculum, access, and equity)	17

These consultations enabled ADEA to refocus and strengthen the areas of discussion and provided sources of evidence of what works, success factors, and some of the challenges.

1.3.1. Impact of COVID-19 on Africa's educational systems

The consultations highlighted issues of interrupted access to schools and learning loss, inadequately prepared and under-resourced teachers, learner and teacher well-being, challenges in creating, maintaining, and improving distance learning solutions, poor nutrition, parents unprepared for distance and home learning, and the rise in dropout rates and increased exposure to Gender Based Violence (GBV) and exploitation.

Evidence from the KIX Observatory on COVID-19 impact on education in 40 African countries from the Global Partnership for Education (GPE) reveal that more than 60% of the partner countries faced prolonged and recurring school closures beyond 200 days, 70% faced teacher shortages at the primary level and 70% at the secondary level. Over five million students in primary and secondary education were at risk of not returning to school, with girls more affected. Less than two-thirds of teachers in primary schools, and just half in secondary schools in the 40 partner countries received training on basic digital literacy, while about one third of the countries added more teaching staff to allow for smaller class sizes and greater physical distancing. Parents and private sector education providers played a key role in financing education at during the peak of the pandemic, a trend likely to continue beyond COVID-19 as Africa's strives for resilience. Existing challenges in the implementation of national learning assessment systems include the absence of baseline information, lack of guidelines and limited capacities of teachers and students to adopt technology in learning and assessment.

To holistically discuss the impact and lessons learned from COVID-19 on education, the stakeholder consultations were framed around the following:

- How COVID-19 has impacted access, relevance, and quality education delivery across Africa.

- The most effective solutions and technologies that contributed or sustained learning continuity, and the role of research in assessing these efforts to improve policy and practice.

- The support of indigenous knowledge and African women and your-led innovations and solutions in building more robust and resilient educational systems.

- Policies, programs, and partnerships needed to address the learning recovery and build back better based on lessons from the implementation of remote education programs and policies.

- Addressing learning losses, re-examining learning assessments, and reconsidering teacher training, for the future.

Responding to the call by policymakers to consider contextual and socio-cultural realities, and to include internally displaced groups like street children and refugees, when developing solutions, stakeholders cited several examples of promising initiatives at the school and policy level. They include the knowledge mobilization based on studies by ADEA and the research evidence from the KIX Observatory, in form of reports, live trackers, policy briefs and blogs on the COVID-19 impact on Africa's educational systems. The studies and research, undertaken between April 2020 and March 2022, focussed on teacher and learner well-being, financing education, schools reopening, teacher training and support, and learning assessment in Africa during the COVID-19. Countries such as South Africa used the information to inform the decision on reopening the country's learning institutions.

Other initiatives are the piloting of the Remote Education Benchmarking Toolkits for basic education, TVSD, and higher education in 10 African countries; the study on the use of ICT in education – from pre-primary to higher education – in 30 African countries; studies by the World Bank on learning poverty; USAID on cohesive data reporting systems; and the provision of regional grants to teacher institutions and capacity building for teachers and learners by GPE. UNESCO and GPE encouraged collaboration and partnerships as well as multi-sectoral collaboration (education, health, agriculture, private sector, and communities). The World Bank facilitated several peer-learning events and continue to monitor the evolving nature of the situation using cloud-based data and information sharing.

Building on the foundations of TES, the focus areas that were to contribute to the discourse at the Triennale included scaling up distance learning solutions, improving teacher and student preparedness for future crises, bringing more education resources in the open access domain, improving back to school delivery approaches, learning assessment and recovery, and reimagining strategies for partnerships and education financing.

- How COVID-19 has impacted access, relevance, and quality education, especially for disadvantaged and vulnerable children.

- The most effective solutions and technologies that contributed/sustained learning continuity (both with teachers and learners) at the different education levels.

- How research can help assess government efforts to improve policy and practice to sustain learning during crises.
- What COVID-19 can teach us about the ability of education systems to absorb the shock of a crisis.

1.3.2. Improving foundational literacy, numeracy, and social and emotional learning

Before the COVID-19 pandemic, more than half of 10-year-olds in low- and middle-income countries were unable to read or comprehend a simple story, according to the state of global learning poverty: 2022 Update. This figure is estimated to be as high as 70%, exacerbated by two years of COVID-19-related school closures that have deepened education inequality, (UNICF 2022). At its peak, 90% of learners worldwide were concerned by school closures, with devastating consequences in terms of learning and earnings losses (UNICEF 2022). In fact, globally around 153 million children missed more than half of their in-person schooling over the past two years, with more than 62 million having missed at least three-quarters of in-person schooling (UNICEF 2021). According to UNESCO IIEP, the most vulnerable children are paying the heaviest price, with evidence of disproportionate learning loss among children from disadvantaged backgrounds, children living in rural areas, children with disabilities and younger students.

Without, or with weak, foundational learning skills, the benefits of education in later years are lost. The foundational learning forms the basis of all future learning. The foundational learning prepares children for further learning levels, and higher order skills for decent and fulfilling work. Those who fail to attain basic literacy and numeracy skills by early primary level find it difficult to catch up with the rigor of the curriculum in later classes and fall behind while creating wide learning gaps. This also increases the chances of these students dropping out of the school system altogether as they are not motivated. It is thus most critical to achieve foundational learning for all children to improve overall student learning outcomes and build an effective and inclusive education system.

With widespread school closures and other disruptions to the education system brought about by the pandemic, the learning crisis has escalated to new heights. While the number of out-of-school children had already started to climb for the first time in 20 years in 2020, by all accounts the increase has begun accelerating. Children must get back to the classroom and must be retained in school, but changes are needed to ensure that they really learn, starting with the foundational basics of literacy and numeracy. Improvements in teacher training and prioritizing teaching fundamentals, assessing learning levels, greater investment in teaching resources, a focus on foundational skills, increase catch-up learning and progress beyond what was lost; and develop psychosocial health and well-being so every child is ready to learn, will help turn the tide and set children on a path to educational growth and discovery.

The first round of consultations noted the growing commitment to foundational learning, demonstrated by the ongoing initiatives to address deficits in literacy and numeracy and to strengthen the focus on social and emotional learning. Stakeholders also appreciated the effect of COVID-19 on foundational learning and the vulnerabilities it exacerbated specific to early learners. Ongoing recovery efforts through remedial learning programmes were noted, in addition to supporting teachers to improve learning. There was consensus on the need to identify a clear set of focus areas to maximize practical insights on improving foundational learning during the Triennale. As part of complementing the existing efforts, leaders at the UN Transforming Education Summit (TES) in New York in September

2022 committed to prioritize foundational learning in transforming education through programming and policy dialogue, enhancing coordination of operations on the ground and basing them on the best evidence available during a rapidly changing crisis, striving to reach and retain every child, assessing foundational learning levels and adapting approaches accordingly, increasing catch-up learning at the foundational level and increasing instructional time, and developing psychosocial health and well-being of learners and teachers. The TES outcomes were further echoed during the stakeholder consultations and contextualized to the African situation and, together, resulted in the following three focus areas for the Triennale:

- Supporting children's quality Early Childhood Education

- Improving teaching for foundational learning

- Assessment informed instruction to support foundational learning, including a child-centred lens

1.3.3. Remodelling Technical and Vocational Skills Development considering digitalization

The ADEA 2012 Triennale, which heralded the paradigm shift from the narrow TVET to Technical and Vocational Skills Development (TVSD), made the following, as some of the recommendations, to countries and education stakeholders regarding this domain:

- Make the paradigm shift from the formal, school based TVET to a holistic and inclusive TVSD.

- Seek innovative approaches to the upgrading of the professional and pedagogical skills of TVSD instructors and system managers.

- Embrace skills development strategies that incorporate the concept of environmental sustainability

- Integrate ICT and e-learning into the delivery of TVSD; and apply technology and modern farm practices in the agricultural sector.

- Re-structure the traditional apprenticeship system to make it more efficient and promote the upward mobility and professional development of the apprentices.

- Institutionalize quality monitoring and training evaluation mechanisms in TVSD.

Ten years since the above recommendations, African countries have made significant strides, but challenges remain fuelled by the continent's ever-growing youth population and driven by emerging issues such as the COVID-19 pandemic, digitalization and the fourth industrial revolution (4IR), climate change, and the blue and green economy. Some of the progress in 2022 include blended learning and hybrid forms of training, digital technology adoption and digital skills (towards effective administration and process efficiency), industry-integrated higher education (shift from supply-side to industry demand) and increased corporate investment in improving and modernising industrial training.

Based on the experience of the stakeholders under this sub-theme, the consultations highlighted the need to be clear on the source and type of demand in TVSD; whether it includes current needs of employers, the training personnel, or the side of learners/trainees – for example, those who did not make it to university due to the pandemic are keen to go to TVSD, meaning more learners may want

to be absorbed – and the future potential demands that require some form of trade-offs. Also covered is the impact of TVSD in climate smart agriculture, linking innovation with business development, using data from evidence, for example regarding the perception of TVET, and the gender and inclusivity dimension in TVSD with the need for greater girls' and women's participation through having conducive environments in TVET institutions, for example. Finally, the issue of placing TVSD on the lifelong learning perspective, looking at skills development that takes into account the moments of life and moments of inclusion.

In view of the above, the stakeholder consultations considered some important issues in remodelling TVSD. First was improving the enabling policy environment for TVSD by providing guidelines for the formulation or review of policies, governance frameworks, and models for developing appropriate interventions to address skills mismatch and youth unemployment. The second focus was on reversing the persistent poor perception of TVSD and making it an alternative to the traditional academic pathway, to attract more students and trainees. Financing is a key aspect and stakeholders deliberated on modalities of obtaining innovative, efficient, and sustainable alternative financing mechanisms in TVSD. The fourth area was on the role of the private sector in ensuring that TVSD is more demand-driven through their greater private sector engagement. Leveraging technologies, particularly digital technologies, is critical for Africa if it is to achieve agriculture-driven transformation, exports-oriented manufacturing, and improvements in the services sector and creative industries. Building partnerships to improve access, quality and relevance of TVSD, and innovating together to improve industrial production also came into sharp focus during the stakeholder collaborations, and the need to rethink pedagogy and teaching in TVSD to close the skills gap and match national, regional and continental needs for resilience.

The consultations agreed on the following four main topics for discussion at the Triennale:

- Quality of TVSD systems.
- The evolving labour market and the skills ecosystem.
- Innovations and disruptions in TVSD: technology, financing, sustainability, access, and equity.

1.3.4. Reimagining Africa's Higher Education and Scientific Research

The education stakeholders consulted appreciated areas where there is some progress in the higher education as scientific domain. The intra-Africa staff and student mobility in terms of free labour and skills movement continues driven by the positive results so far realized by initiatives such as the Harmonization of African Higher Education, Quality Assurance and Accreditation (HAQAA2) project (2019 to 2022), and the African Continental Qualifications Framework (ACQF). Another positive effort is by the Africa Higher Education Centers of Excellence (ACEs) Program that promotes innovation and contributes to academic quality for the labour market, working with bodies like the Association of African Universities (AAU). The Partnership for Skills in Applied Sciences, Engineering and Technology (PASET) has enabled the creation of a critical mass of highly skilled scientists, researchers, technicians, and innovators for the continent's priority sectors. There has also been greater engagement of universities in the development processes and practices and in building Africa's innovation capacity, championed by networks such as the Regional Universities Forum for Capacity Building in Agriculture (RUFORUM). Another area with significant progress is in the use of technology for learning continuity in this domain, especially in response to the COVID-19 pandemic.

At the same time, there are emerging issues that hamper the expansion of some of the efforts above. First is the weak governance and accountability mechanisms for national quality research and the absence of national structures for the promotion and transfer of research results for use in responding to community-based challenges. The second issue is the few, and weak, vocational courses in STEM and the inappropriate environment for teaching, learning, and research. The inadequate levels of qualified teaching staff and non-modernization of the higher education systems also pose a challenge, and so is the perennial challenge of financing higher education and research. Despite the positive showing of leveraging technology in the teaching and learning during COVID-19, the sub-sector still has under-developed remote learning systems manifested in the inadequate teacher preparation in ICT pedagogical use, lack of distance learning offers with quality standards, and the poor quality of ICT infrastructure in many universities and higher education institutions. Lastly, there is difficulty in combining different types of knowledge in training and research to develop transversal skills and expose students to innovative and multidisciplinary environments.

Informed by the above, the stakeholder consultation meetings agreed on the need to exhaust discussions on agreed topics to ensure final Ministerial commitments speak to the issues and recommendations from the Triennale discussions, and to:

- Reflect on factors, conditions, and drivers promoting African-led research and the roles, responsibilities, and obligations of the different actors.

- Rethink the role of technology, universities, and research institutions in promoting innovative land and water use as well as value addition.

- Build mechanisms for stronger partnerships and collaboration, particularly South-South and North-South, while deeply leveraging existing networks and intentionally weaving the core values and principles into the conversations.

- Facilitate sharing of country experiences and lessons around the main topics based on partner-supported projects.

- Exhaust discussions on agreed topics to ensure final Ministerial commitments speak to the issues and recommendations from the Triennale discussions.

Participants affirmed the need for the continent can tap into existing relationships by promoting North-South and South-South cooperation – for example drawing from the experiences of countries in Latin America and the Caribbean – and driving towards having common qualification frameworks and enhancing the sharing of resources. In this context, the networks in the South can act as strong nodes for the northern partners. This nodal approach leverages existing networks to create a network of networks. Creating greater linkages between technical and vocational skills development (TVSD) and the traditional higher education institutions is key for the provision multiple learning and training pathways. This can be in the form of a public-private-partnership model, with clarity on the roles, responsibilities, and obligations of the private sector. The commonly considered challenge of brain drain can positively shift to 'brain sharing' or 'brain circulation'. However, this requires that a mutuality principle is intentionally incorporated to avoid the danger of 'siphoning' the brain from Africa. There is a need to have built-in mechanisms that discourage unidirectional intellectual flows and, instead, builds mutual partnerships. The African Centers of Excellence are becoming important nodes in such partnerships.

The consultations resulted in the following as the main topics of discussion at the Triennale under this sub-theme:

- Promoting appropriate policies and effective governance and accountability for a needs-driven and African-led national research and innovation.

- Building a skilled labour force to drive innovation and competitiveness in Africa – especially in STEM-related competencies, and the role of Higher Education in building skilled entrepreneurs.

- Expanding higher-level teaching, learning, and research and strengthening research-industry linkages through innovative and alternative financing options.

- Improving the quality assurance and harmonization of qualifications to enhance free labour and skills movement, contributes to the transparency of qualifications and trust between African qualifications frameworks.

1.3.5. Tackling the education and skills data challenge in Africa

Africa needs a strong data ecosystem devoted to the academic environment to help transform education in a sustainable manner. The availability and accessibility of real time data would help African countries to realise the fourth goal of the United Nations' sustainable development agenda. The COVID-19 pandemic has had an enormous impact on education at every level all over the world. The pandemic has exacerbated the existing data crisis in education and skills on the continent. Even though several countries made positive efforts in providing data on education and skills, major challenges remain, as global, continental, and regional reports still exhibit missing or outdated data. As a result of the perennial challenge of scarce quality data on education and skills for informed decision making, poor data continues to hurt the ability of African countries to make informed, timely and strategic policy decisions on education and skills issues.

In terms of the continental strategic focus, one of the critical enablers for Africa's transformation as reflected in Agenda 2063 is having "accountable leadership and responsive institutions". This necessitates "building visionary and accountable leadership...through robust and transparent planning, implementation, and M&E mechanisms at all levels." The eleventh strategic objective of CESA 16-25 is to "improve the management of education system as well as the statistic tool". To do this, Africa needs to (a) build and enhance capacity for data collection, management, analysis, communication, and usage, (b) improve the management of education system and statistic tool, and (c) establish regional and continental EMIS and observatories, disseminate regular digests and outlooks, provide support to educational think tanks, and support educational research. Three initiatives are responding to this: the CESA/SDG4 Indicators Benchmarking Initiative for joint reporting (Continental Report), the ADEA-GEMR Africa Spotlight Report Series, and the ADEA project covering up to 30 African countries aimed at strengthening their capacity to collect, manage, report, and use education and skills data for decision making around policy, planning, programme development, monitoring, and evaluation. Encapsulating these continental efforts is the African Continental Free Trade Area (AfCFTA).

Five broad issues framed the stakeholder consultations for this cross-cutting theme. First is how to shift the approach of decision making to be more evidence-based and the importance of using quality data in decision making. Second, addressing the lack of actionable national policies for strong data systems, accompanied by robust legal frameworks, and weak policy implementation. The third issue

is about ineffective partner coordination, as part of taking ownership by countries and misaligned political and institutional incentives. Another area is the inadequate resource capacity to collect, process, and publish data on private sector skills requirements and to track graduate employment based on standard norms for data quality. Poor dissemination and inadequate utilization, fragmented education systems and weak systems integration formed the fifth issue. Sixth is the weak capacity in national statistical agencies to engage with sector-specific data, and ineffective NSDS implementation. Finally, discussions also covered the issue of weak mechanisms to track movement of students, including refugees and those studying within and outside their national borders, as well as to track their level of learning and skills.

Following the discussions on the above issues, stakeholders observed the need to understand from the country representatives, during the Triennale, the most pressing policy questions they are trying to answer, and what kind of data would assist. They further agreed on the need to consider the following, as part of addressing the existing challenges:

- Inclusion of all countries and administrative regions (including rural areas) in the data map of regional (e.g., SACMEQ and PASEC) and national assessment bodies.

- Linking inputs to outcomes and improving access and use of learning outcomes data & opening-up and showing some of the data that is considered "not good".

- Embracing opportunity cost: using the reason why data is collected as an incentive, and the consequences of not collecting data, for the data respondents.

- Leveraging data to advertise what is working and what could be gained by providing additional support/ resources from Ministry of Finance.

- Poor coordination, thus limiting access, despite data being available.

- Multi-sectoral collaboration: learning from other sectors (e.g., health, gender, finance) and units such as NSDS.

- Building capacity, including of planners and statisticians, to utilize data, especially at sub-national levels.

The stakeholders also underscored the importance of focussing on technology, data analytics, and the security and protection of data on learners. The integration of EMIS and LMIS in the provision of skills and labour market also came into sharp focus, and the need for governments to prioritize the funding of data operations as these are more project based rather than being fully embedded in the Ministry of Education's budget.

Following the consultations, the following four topics informed the discussions at the Triennale for this cross-cutting area:

- Policy-level shift in (a) decision making approach to be more evidence-based and quality data driven, and (b) enhancing cross-sectoral coordination and collaboration.

- Priority areas of interventions for countries' capacity strengthening beyond policy: to collect, manage, analyse, publish, and deliberately use quality education and skills data.

- Lessons learned from previous experiences and ongoing interventions addressing the education and skills data challenge.

- Practical steps governments and partners need to take to scale up successful experiences in education and skills data, including leveraging modern tools and technologies to strengthen data systems.

1.3.6. Leveraging digitalization and EdTech to improve the sustainable delivery of education and training in Africa

Education technologies (EdTech) can have a positive impact on learning if countries harness the efforts of multiple actors and integrate EdTech into the broader education system policy and practices. This requires a comprehensive approach. Leveraged effectively and efficiently, digitalization can promote data and evidence generation to inform such decision making. Governments need to engage with key partners to support major investments in education technology and remote learning infrastructure in hard-to-reach areas as well as in countries in transition. In Africa, there have been strategic focus at the continental level to promote the use of ICT in education, with a focus on digitalization and education technology (EdTech). There is significant progress in embracing home-grown technology with examples in health, introduction of electric vehicles, use of robotics, cashless transactions through mobile and online platforms due to internet and mobile penetration, and transformations in the agroindustry towards value addition. The African Union has also developed key frameworks to support developments in these areas, chief of which are the AU Digital Transformation Strategy for Africa (DTSfA) and AU Digital Education Strategy and Implementation Plan (DESIP). For education, the third strategic objective of CESA 16-25 is to "harness the capacity of ICT to improve access, quality and management of education and training systems)". Meeting this strategic objective entails several initiatives, including formulating policies for ICT integration in education and training; building capacities on the use of ICTs in the planning, implementation, monitoring, strategies and programs; promoting the development of online contents considering African and local specificities; capitalizing on existing and successful ICT-driven initiatives; providing appropriate and sufficient equipment facilities and services; and creating mobile and online education and training platforms accessible to all students regardless of their circumstances.

Meeting the above is a long target as the path is wrought with some key barriers to success. First is the ineffective use of ICT in Africa's education systems, borne by the inadequate ICT infrastructure, knowledge, and technical support as well as insufficient pre- and in-service training. Secondly, there is a dearth of holistic and comprehensive frameworks for infrastructure enhancement, improving the use of ICT in schools, and large-scale professional development. The use of ICT to improve availability, accessibility, and perceptions towards learning outcomes data is also weak. Furthermore, the process of benchmarking ICT practices, competencies and performance in education is scarce in the continent. There are few institutionalized approaches for harnessing ICT, especially mobile technology, to resolve the challenge of teacher absenteeism, exacerbated by COVID-19. The last issue relates to having deliberate mechanism to improve evidence-based decision making in education in Africa using ICT, and therefore Africa needs a strong data ecosystem devoted to the academic environment to help transform education in a sustainable manner.

Informed by this situation, the stakeholder consultations that ADEA conducted interrogated several things. First is the existing country policies and strategies in the use of digital technologies for education, including remote learning, for the full education spectrum. Second, the value addition for e-education programs at the different levels of education. Third, examples of success stories, challenges, and good practices around EdTech, remote learning, use of ICT to improve accessibility

and availability of learning outcomes data. The fourth focus was on how EdTech innovations, such as technology-enabled learning materials, can close the skills gaps in developing countries by improving the quality of education delivery and resilience as Africa thinks beyond the COVID-19 pandemic. The consultations also explored how countries are engaging with partners in supporting the use of digital technology in education, and the recommendations of best practices from the countries.

The discussions that followed highlighted the important role of Telcos and other players, as part of private sector engagement, especially non-profit and EdTech companies, some of whom participated in the exhibitions, as infrastructure goes beyond education. There was also a call to balance infrastructure, efficient management, and increasing access with integrating ICTs to build skills, and to consider also the of technology to improve access to learners with disabilities – technology and inclusion. Technology was also seen to be a lever innovate research and academic services. Countries are also encouraged to harness the wide stakeholder network in using technology to collect and analyse data, and the outcome should guide development partners to focus their interventions accordingly. There is value in applying technology to prepare teachers, especially those in marginalized communities, to adapt the content appropriately for radios and TV platforms, for example. Different ways should be explored to contextualize the EdTech space. Training through pan-African initiatives such as the Digital Transformation of TVET and the Skills Development System could be leveraged to address some of the capacity building issues. Such training should also be for those supporting the ICT solutions.

Stakeholders also observed that the coverage is quite expansive, hence the need to focus on a few areas. The digitalization and ICT policies and plans should not be standalone but be part of the overall education sector planning. Apart from private sector involvement, ADEA should reach out to other specialized Ministries such as on infrastructure, trade, and ICT in a holistic stakeholder involvement. The Triennale session could also consider addressing some of the more recent evidence – like the use of no-tech and low-tech platforms for education and interrogate how ICT can fill some of the gaps in teacher capacity development, given the continuing teacher shortages. The benchmarking of ICT practices needs to include for private sector engagement to ensure certain standards are met – for example, that the software provided does not quickly become outdated and irrelevant considering the "leapfrogging phenomenon". Finally for this cross-cutting theme, participants concurred on the need to establish a partner network that can actively support countries with some of the realistic recommendations emanating from the session, giving visibility to EdTech innovators, and using key messages to trigger the scaling up and disseminate good practice".

The cross-cutting theme settled on the following topics for discussion at the Triennale, based on the consultations:

- Existing national policies and strategies in the use of digital technologies for education, including remote learning, and the status of including ICT in education in the education budgets.

- Value addition of e-education programs (success stories, challenges, good practices, and lessons) and using digital technologies to improve accessibility and availability of learning outcomes data.

- Role of EdTech innovations in closing the gaps in skills, and enhancing resilience, by improving the quality of education delivery for all, including persons previously excluded, or at a risk of being excluded.

- Partners engagement in supporting the use of digital technology in education.

1.3.7. *Improving access and equity in providing quality education for vulnerable groups*

The access lever can be seen through the lens of physical access (including the distance from home to institutions), physical education infrastructure (availability of adequate educational and support facilities and human resources), costs relating to education and training (including tuition fees and associated expenses such as uniforms, transportation, and nutrition), and the impact of socio-cultural norms and values that prevent some students from attending and remaining in school. Other access issues include career guidance, professionalized teacher training, digital infrastructure, and lifelong learning through continuous skills development.

The focus on equity in education has two intertwined dimensions of fairness (ensuring personal and social circumstances do not hinder the achievement of educational potential) and inclusion (attainment of a basic minimum standard of education for all). Vulnerability also differs based on context. To be truly equitable and universal, education must meet the needs of the most vulnerable populations. Understanding who those students are that need most support, as well defining how best to provide this support, is a critical component of making education accessible to all.

There has been uneven progress in bringing on board learners from vulnerable populations in our midst to access education that is equitable and of quality. The COVID-19 pandemic has widened existing gaps, making it difficult to "go far" in achieving the goals and aspirations as espoused in the global, continental, and even national frameworks in terms of access and equity. Significant learner populations had no access to learning because of the pandemic that saw intermittent school closures, limited access to teachers, learning materials and platforms, and increased vulnerability outside the school, especially for girls.

As part of the global response, stakeholders at the recently concluded Transforming Education Summit (TES) in September 2022 committed to the call for an inclusive, transformative education where all learners access and participate in education in a safe and healthy manner, free from violence and discrimination, and supported with comprehensive care services within the school settings. It also recommends a global system to track crises-affected children and youth, disaggregated by gender, disability, legal status, and other relevant fields on an annual basis. This is in addition to calls for increases in the allocation of public resources to underserved groups.

Thus, among the key issues is the prevalence of the barriers to equity and access in education even before the COVID-19 pandemic, and these became more prominent during the pandemic. Access to educational resources remains unequal, with learners in vulnerable situations hit the hardest. Evidence also shows that schools can reinforce discrimination and there are new education gaps emerging as Africa builds back better and more resilient education systems. Furthermore, it is important to consider the context when designing education reforms for equity and access. There are tools and experiences that regional and global partners can share to benefit countries.

The stakeholder consultation meeting identified the need to cover more access and equity issues at the level of TVET and higher education with a lens of empowerment. Another aspect highly relevant for Africa is how to improve access to skills and lifelong learning for people in the informal economy. Countries can adapt existing instruments on the transition to formality that highlights access to education and training and incorporates the recognition of prior learning and the upgrading of informal apprenticeships. Issues of social justice and social protection are also important as they facilitate the recognition of policies on affirmative action. Context is also key in terms of appreciating how equity is affected over time. In terms of the equity concept, language is an important consideration at the level of the classroom and in the pedagogical context. Interaction in terms of dimensions of exclusion should factor location, ethnicity, gender, and inclusion. When looking at the effectiveness of interventions, focus should also be on addressing the phenomenon of "stale policies", and EMIS needs to go deeper, beyond disaggregation – in terms of gender, geographical, socio-economic status, to name a few – and to consider whether it captures vulnerability. It should also deliberately link to other information sources for targeted resource allocation. Finally, access and equity need to be seen from a social security dimension, in terms of lifelong learning, looking at ECD and the implication for access to higher education.

The following are the focus areas the stakeholders considered for discussion at the Triennale, for this cross-cutting area.

- Improving equitable and inclusive education access for vulnerable children and youth, including those affected by crises.

- Investing more equitably and efficiently in education and training, including directing resources to learners with the greatest needs and setting concrete targets for more equity.

- Strengthening links between learning institutions, homes, and communities for better participation in the children's learning.

- Promoting diversity and providing for successful inclusion within mainstream education.

- Investing in systems that improve disaggregated data collection, management, and publishing to support evidence based and targeted decision making.

2. PARTICIPATION, PARTNER SIDE MEETINGS AND EXHIBITIONS

More than 800 participants (comprising 324 in-person, with ADEA sponsoring 56, and the rest virtual) graced this seminal event, including the following:

- Ten Ministers of Education and two Deputy Ministers of Education from Malawi, The Gambia, Uganda (2), Mauritius, Cote d'Ivoire, Rwanda, Mauritania, Zimbabwe, Madagascar, Angola, Zimbabwe, and Ghana together with their senior officials.

- Five heads of delegations and senior officials from Kenya, Nigeria, Democratic Republic of Congo, South Africa, and Zambia.

- Representatives from the African Union (Education Division, IPED, CIEFFA, AUDA-NEPAD); CESA Clusters of Education Planning (ADEA), Curriculum (ACA), and Teacher Development (UNESCO IICBA); European Union, and the Commonwealth Secretariat.

- Chief Executive Officers, Directors, Deputy Directors, and senior managers from key development partners, including:

  African Development Bank, Mastercard Foundation, USAID, Islamic Development Bank, Bill & Melinda Gates Foundation, LEGO Foundation, GPE, FAWE, VVOB, ESSA Africa, GIZ/BMZ, HCA, Africa Practice, Acasus, JICA, PAL Network, TaRL Africa, Centre for Global Development, FinCEED, RTI International and Better Purpose, ILO, Nuffic, Yidan Foundation, UNESCO (HQ, UIS, GEMR, IIEP, UIL, IICBA), CONFEMEN, World Bank, Destination Imagination, EDC, Open Development Education, and Norad.

- Presidents, chancellors, vice chancellors, senior researchers from the academia, including University of Mauritius, Polytechnic Mauritius, University of Toronto, University of Oslo, University of Nairobi, Stanford University, ANAQ-Sup, African Population and Health Research Center (APHRC), Smart Africa, and IDRC.

The participants also included 64 local participants from Mauritius and additional participants from 35 African countries and from 13 non-African countries. ADEA reached out to potential partners to support the Triennale through, for example, sponsoring some country participants, commissioning research and studies, moderating and co-leading some sessions.

Apart from demonstrating its convening power in this Triennale, ADEA continued to enhance the social capital that its high-level events are known for, through the exhibitions mounted during the Triennale, and to grow its network and entrench collaboration and peer learning through knowledge and experience sharing in the side events organized by partners on the first day of the Triennale.

Below are the details of the exhibitions and partner side events:

Exhibitors
GIZ, UNESCO IIEP Dakar Pole, USAID, PEOPLE ACTION, YIDAN PRIZE, KNOWLEGE PARTNERS, PAL NETWORK, BETTER PURPOSE, VVOB RWANDA, UNESCO Headquarters, AfDB, University of Oslo Norway-DHS4E

- Planning for the future of education and training in Africa: priorities for the continent and book launch on SDG4: Planning for Flexible Learning Pathways in Higher Education (UNESCO-IIEP)

- Leveraging Education Analysis for Results Network (LEARN), the African Union basic education peer learning mechanism (AUC/IPED, ADEA & UNESCO GEMR)

- Strengthening Synergies between the 21CCEM Outcomes & ADEA Triennale (Ministry of Education, Kenya/ Commonwealth Secretariat)

- Effective school leadership to promote resilient education systems in Africa (VVOB – education for development)

- How do we get all children reading and doing mathematics? (Bill & Melinda Gates Foundation, RTI International and Better Purpose)

- Rethinking TVSD for Africa's Jobs of the Future (BMZ/GIZ)

- Exploring modalities of working together better with Member States to take forward the TVSD agenda for the continent (AUDA-NEPAD)

- Impacts of the COVID-19 Pandemic on Education in Kenya, Ghana, Malawi, and Senegal (Center for Global Development – Europe)

- Understanding and appreciating family literacy and creating interest among member countries to plan and establish family literacy programmes (ADEA ICQN-TL & UNESCO-UIL)

- Presentation and discussion of findings of in-depth analyses of delivery approaches in Ghana, Jordan, Pakistan, and Sierra Leone (Education Commission)

- Understanding the areas where Ministries of Education need capacity strengthening the most (ADEA)

- Per-launch of the Continental Report – "Education in Africa: Placing Equity at the Heart of Policy" (AUC & UNESCO)

- PhET (interactive science simulations) Demonstration Workshop

- Launch of "Born to Learn": 1st report of the Africa Spotlight Report Series initiative (ADEA & GEM Report Team)

- Promising approaches to improving foundational learning and integrating new evidence into national policies and programs (World Bank Accelerator Program)

2.1. Key takeaways from the partner side events

Leveraging Education Analysis for Results Network (LEARN), the African Union basic education peer learning mechanism:

The research on improving systems of education reported 3 insights: (i) Children begin to fall behind very early, the learning deficit compound overtime, (ii) Significant variation between countries'

performance demonstrate the possibility to significantly improve through peer learning mechanism, (iii) It is not sufficient to focus on enrolment or on equity, as even privileged children don't learn sufficiently.   The first spotlight report focused on 5 core countries: Ghana, DRC, Mozambique, Senegal, Rwanda. The initiative uses an analytical framework focusing on planning, implementation, monitoring, and evaluation, and presents best practices implemented by each country, including bilingual education in Mozambique and remedial education in Senegal. The session also acknowledged the following needs: aligning the curriculum with the country's mission or vision and prioritizing the early grades by putting the best teachers there. This session was linked to the launch of the Africa Spotlight Report Series initiative by ADEA and UNESCO GEMR.

Strengthening Synergies between the 21CCEM Outcomes & ADEA Triennale:

Discussions covered Sustainable recovery from the learning crisis, preparedness of the education sector from pandemic related shocks and future disasters, how to convert recommendations into actions of the 21 CCEM & 2022 CHOGM, and inequity in higher education in the commonwealth. The follow ups established include commitment by commonwealth countries to focus on foundational learning, the ICQN on ECD to join hands with Commonwealth Secretariat to work more on foundational learning in other commonwealth countries, the Association of Commonwealth Universities can work closely with the Commonwealth Secretariat, Ministers and governments to tackle the higher education inequality problem – it can act as a convening forum for higher education and harness the knowledge and expertise of ACU networks and communities and can also work in partnership with regional forums, and enhance the acquisition of foundational skills through curriculum reforms that underscore development of 21st century skills and urgent learning recovery for all and the right to affordable internet access as part of the right to education.

Effective school leadership to promote resilient education systems in Africa:

Participants discussed key best practices developed by different governments to ensure effective leadership. They include (1) setting up central mechanisms to develop and assess school leadership through establishing school boards and professional development programs, (2) attempting to tackle challenges in accountability in the provinces by designing performance contracts with specific targets, and (3) building collaborations and partnerships between VVOB and partners such as ADEA, UNESCO, and other international and local partners for the development of training material.

How do we get all children reading and doing mathematics:

The key areas discussed were: Learning crisis – learning poverty statistics for the continent were presented and the impact of these on the quality of life of children was discussed, HCA Scorecard – was introduced as an accountability mechanism that can be leveraged to improve learning outcomes in Africa in the spirit of healthy competition, successful instruction approaches – specific approaches to instruction that have been successful at improving foundational learning were presented by Funda Wande, ARED and TaRL Africa. Funda Wande introduced numeracy and literacy textbooks along with structured teacher guides that improved learning outcomes by 20%. ARED discussed the learning for all programs based on the structured pedagogy approach, which included books in local languages and support for teachers. ARED's remedial program was also introduced. Lastly, TaRL Africa presented the TaRL approach which has reached over 3 million African children. Ministerial comments: The Ministers of Education of Côte d'Ivoire and Gambia called on the policymakers of the continent to work harder to improve learning outcomes for all African children, and to embrace knowledge sharing and peer-learning.

Impacts of the COVID-19 Pandemic on Education in Kenya, Ghana, Malawi, and Senegal:

The survey findings presented include: a vast majority of heads of households in all countries reported being negatively impacted economically by the Covid-19 lockdowns, leading to a drop in enrolment and participation; inequalities were exacerbated in terms of access to education, and remote learning strategies employed by governments often failed to reach the most vulnerable population who needed it most; the policies implemented by governments for combating pandemic have not been institutionalized in the system and schools have reverted to working as usual; the pandemic affected the teachers' motivation, especially in private schools where teachers feared they would not be paid; learning outcomes were also negatively impacted with failure and repetition rates increasing in most countries. In conclusion, the education systems of these countries were not resilient enough and a lot is needed to protect the education system from future disasters. The Minister of Education, Malawi, said the government was building additional classrooms, recruiting more teachers, and building a national education radio, to build resilience.

Understanding and appreciating family literacy and creating interest among member countries to plan and establish family literacy programmes: a family and intergenerational literacy and learning (FILL) approach was presented, incl. 4 components: (i) ECE, (ii) adult education or employment training, (iii) parenting education, (iv) parents and children together time. Best practices on family literacy programs were showcased, based on 3 pillars (i) children only home-based (for 3 to 5 years old children) and primary school based (for older children in schools) sessions, (ii) parents/ adult only home-based group sessions, (iii) joints home-based session for parents and children. Participants stressed that the family is responsible for the education of young children at a crucial age of development, and that families should thus be coached to best prepare children for school. The importance of cross-ministry collaboration was highlighted, especially involving the Ministry of Health, which works with children from 0 to 3 years old, mothers and other caregivers. The solutions of community based ECE centers, and mothers' clubs were discussed.

Presentation and discussion of findings of in-depth analyses of delivery approaches in 4 countries:

Delivery approaches in Ghana, Jordan, Pakistan, and Sierra Leone were discussed at the event to deliver improved outcomes in education and health systems of the countries. It was noted that when accountability was streamlined, delivery approaches were very successful at achieving targets. Delivery approaches were also found to be more successful when the delivery unit had close ties to both the political sponsor and implementing bureaucrat. However, delivery approaches did not perform well when accountability was not streamlined and there were many stakeholders involved, resulting in a dilution of responsibility. Delivery units where the reform required negotiation with multiple stakeholders also failed to deliver promising results. Sustainability of delivery approaches after the project ends may also be a challenge. The recommendations include harmonizing targets and monitoring frameworks across stakeholders, leveraging the delivery units' political capital to resolve high level bottlenecks, and ensuring that accountability is streamlined through the Minister rather than parallel structures in and outside the government.

Understanding the areas where Ministries of Education need capacity strengthening the most:

The main questions discussed how to make sure that the recommendations are indeed implemented, and how to identify the capacity needs (individual, and organizational capacity). The various levels of capacity building were discussed, and the obstacles encountered in each of them, including institutional level (coordination, political conflict), organizational (discrepancy between formal and actual organograms, lack of materials), and individual levels (lack of continuous training, discrepancy between competency and position). The challenges raised include how to assess capacity, and ensure objective appraisal, how to increase accountability; how to secure institutional memory, when senior staff are moved too often for political reasons; how to ensure that staff is recruited for their competencies and not because of their political affiliation; and how to make sure that partners collaborate efficiently to support the capacity building efforts. The importance of training for education managers (including school heads) was highlighted, including pre, and in-service training.

The Continental Report – "Education in Africa: Placing Equity at the Heart of Policy":

The report speaks to access, enrolment, and completion of learners from primary to upper secondary. It is an instrument for monitoring, identifying equity gaps, accountability and policy making. The wide angle adopted by the report (FLN to Tertiary) is very useful as it brings out several insights along the lines of gender and education levels. There is an equity challenge in all education systems in the continent. The report shows that the right to education is not equally respected in many countries. Required Policy actions: implement system-wide reforms, strengthen micro planning approaches, and design policy instruments to channel resources to target groups. Education policies need to be accompanied by targeting strategies aimed at ensuring that interventions reach children in most need. Improving data and information systems is also crucial to identify and characterize the population to be targeted and their needs. The Minister of Education, The Gambia, said that the situation has improved due to several government initiatives and that girls now outnumber boys in education in The Gambia, but there is still a difference in performance. She emphasized the need for strong policies and high-level political commitment.

3. OFFICIAL OPENING, PLENARY & BREAKOUT SESSIONS

3.1. Official Opening

Hon. Mrs Leela Devi Dookun-Luchoomun, Vice Prime Minister and Minister of Education, Tertiary Education, Science and Technology, Mauritius officially opened the Triennale on the second day, with remarks from Hon. Dr Monica Musenero, the Uganda Minister of Science, Technology, and Innovation. Hon. Musenero is also the Chairperson of the Bureau of Specialized Technical Committee on Education, Science, Technology, and Innovation of the African Union (AU STC-ESTI Bureau) and the Chairperson of the ADEA Steering Committee.

Solidarity messages enriched the official opening. The following are highlights of the messages from some of ADEA's key development partners:

- Mr Rodger Voorhies, President, Global Growth & Opportunity Division of the Bill & Melinda Gates Foundation: Without improving the foundational skills of reading and mathematics, we will not be able to break intergenerational cycles of poverty and inequality. Examples include work in Zambia and Malawi, and commitments by Sierra Leone and South Africa. COVID-19 eroded the gains made before its arrival, and especially in education in Africa. The Born to Learn report launched by UNESCO, African Union and ADEA is one of the initiatives that will help to address the learning crisis by prioritizing the basic skills of reading and mathematics in primary schools. Children learn best when taught with the structured approach that is targeted at their level. Successful programmes like TUSOME in Kenya show that progress to scale is possible when teachers are supported to use best practices. We must measure what matters and countries can embrace new methodologies, such as by UNESCO UIS, to support improved national assessment systems measuring essential foundational learning skills.

- Ms Jutta Urpilainen, Commissioner for International Partnerships, European Union: Support for the right of every child and young person to quality education. The EU fully supports the transforming education in Africa and the commitments made by AU member states at the special meeting in TES. Leaders agreed that education is one of the pillars of the renewed AU-EU partnership in the context of the EU global strategy. EU has significantly increased its funding to education globally. It is developing a Euro 100 million regional teacher training programme incorporating the latest digital innovation in teaching. Initiative is set to be launched in Africa in January 2023. EU is also investing Euro 500 million in vocational education and skills development, contributing Euro 970 million to support transformative higher education and mobility opportunities, and fostering inclusive learning opportunities for young people in Africa and between Africa and Europe. Young Africans must be given a chance to acquire the right skills.

- Ms Titia Bredée, CEO (Nuffic): Nuffic believes education is a right for everyone to enable them to become the person they want to be and to play their role in the future society. None of this is possible without learning. At the most basic level, regardless of the method of learning (formal or informal), it starts with the transfer of knowledge from one person to the other. The challenges we face together are enormous, demonstrated by the SDGs, and social and economic challenges cannot be solved in isolation, "we need each other". Let us face the challenges together, with the first level being between countries, regions, and continents. Triangular cooperation is rooted in innovation and collaboration, geared towards addressing issues by sharing experiences, knowledges, and networks – the ADEA Triennale attests to

this principle. Second level is between civil society, the private sector and public policy efforts, aligning education with labour market needs with social developments is crucial. Systemic change cannot be realized without a systems approach. Examples of innovations within the COVID-19 pandemic include new apps, portals, MOOCS, digital projects. It is also about adaptive learning.

- Hon. Svenja Schulze, Germany Federal Minister for Economic Cooperation and Development: Education can be used to overcome harmful gender norms and the resulting practices of early marriages, changing discriminatory structures by making education and labour market policies gender transformative – with examples of Germany's support to South Sudan and Ghana. Quality vocational training and practice-oriented higher education is crucial, hence the support for scholarships, alumni programs, and partnerships between higher education institutions. Germany is engaged with partners such as ADEA, the African Union, and the African Development Bank in vocational training.

- Ms Stefania Giannini, Assistant Director-General for Education, UNESCO: The impact of COVID-19 has been compounded by other crises such as climate change, rising food and energy prices, and global recession. These have set back the progress made over decades, on all fronts, widening inequalities and pushing millions into extreme poverty and hunger. We must have hope to go beyond these crises, towards transformation, moving together and investing more and better in education. It is about changing the course about our way to learn and teach. The high-level conferences by UNESCO have helped set the global direction and mobilize governments and partners in bringing about this transformation in education. The new global TVET Strategy helps to provide the youth with new skills in response to demand. The Campus Africa project promotes better connections between African universities and the rest of the world by supporting infrastructure for knowledge and research in Africa. The Triennale theme is necessary to harness the power of education and of research and science. The UN TES provides the political capital involving 46 African countries out of the 133 countries.

- Dr Peter Materu, Chief Program Officer, Mastercard Foundation: The disruptions caused by the challenges of the last two years call for urgent rethinking of how we build the resilience of African education systems. At the same time, the pandemic gave rise to remarkable innovation, with viable alternatives like virtual learning, use of radios and TVs, the rise of mobile and SMS based revision materials, online study communities and applications designed to ease the administration burden experienced by teachers. There is need to transition the efforts from being a reaction to COVID-19 to being a resolve to build and mainstream more resilient education systems, that are learner-centred, can withstand shock, continue to drive learning in an inclusive way, enable young people in Africa to realize their aspirations, seeing themselves more as innovators, entrepreneurs and transformative leaders as opposed to just employees. The Mastercard Foundation advances education for young people and deepens financial inclusion for the poor through its 10-year Young Africa Works Strategy, with particular emphasis on young women, forcibly displaced people, and young people with disabilities. ADEA has been and continues to be a strategic partner of the Mastercard Foundation and we look forward to greater collaboration with ADEA and other partners.

- Ms Ji-young Park, Director General, International Cooperation Bureau, Ministry of Education, Republic of Korea (ROK): Since its participation in the ADEA 2012 Triennale, the Ministry of Education has worked closely with ADEA for the development of education in Africa. This

year's event is all the more meaningful as we celebrate the 10th Anniversary of cooperation between Korea and ADEA. Attention is now focusing on educational transformation to overcome COVID-19 and prepare for future societies, thus the Triennale sub-themes are timely and crucial for discussion. ROK has continuously collaborated in various sectors to help develop educational systems in Africa – e.g., the BRIDGE programme offering foundational learning opportunities to African youth, the BEAR project for TVET in Africa, and the Global Korea Scholarship and Leading University Project or Educational Development Cooperation. As part of constructing new educational systems in post-COVID era, ROK is supporting the creation of digital educational environment. We look forward to the sharing of best practices to help enrich children' growth in safe and wholesome environments.

Hon. Dr Monica Musenero observed that this Triennale was her first in-person ADEA meeting, and the first time to be in Mauritius. She noted that several forums had been organized and hosted in Africa to transform its education. In terms of the purpose and focus for which Africa's education system is designed, COVID-19 has achieved what many things had failed to achieve: put education systems to a standstill and while this was disruptive, it has provided an opportunity to stop and re-examine things that require change in the education system in the continent. For example, was it serving Africa before the pandemic? Was there massive employment of people coming out of the system? COVID-19 has caused us to pause and interrogate why education is not serving Africa. "When we focus on those who are missing education, we miss those who are coming out of education", she said, further asserting that Africa should look at both the head and tail of the COVID-19 coin. Africa needs to reengineer the foundations of education so that the post-COVID education system provides the same promise education provides for the children in the rest of the continent. Both research and development and science, technology and innovation have critical roles in education and human capital development. "R&D should be about fighting poverty and underdevelopment of Africa," said the Minister. Hon. Dr Monica Musenero reiterated the importance of outcome-oriented education for Africa's youth, focusing on available and future jobs. She called on African governments to turn the negative situation occasioned by the COVID-19 pandemic into an opportunity to design a new education system that addresses the continent's specific needs and priorities. Hon. Dr Musenero further appealed to stakeholders to rededicate themselves to growing a new system that addresses Africa's challenges, noting that Africa must think and "stop delegating thinking."

Hon. Mrs Dookun-Luchoomun welcomed all participants, reminding them of the 2003 ADEA Biennale that was held in Mauritius. ADEA has maintained the objective of making its high-level meetings as policy learning platforms for exchange, frank, and open discussions to allow a free flow of ideas and sharing of best practices, and to develop convergent approaches to the challenges facing education systems in Africa. The difference is on the context, necessitating contextualized solutions. In the 2003 Biennale, the rampage caused by the AIDS pandemic prompted ADEA to organize a roundtable discussion to define strategies to stem the tide and its impact on education at the time. Nineteen years later, we are reflecting on the more lethal COVID-19 pandemic. Hon. Mrs Dookun-Luchoomun reminded participants that the time is ticking as the world is only eight years away from meeting the targets of SDG4 and other global goals, and that this meeting is one of the global movements that reached a pinnacle with the Transforming Education Summit (TES) held in September 2022. It provides an opportunity to renew the commitments made to education as a fundamental public good at TES and agree on a clear action plan to implement the commitments. Sound foundational learning is an imperative to mitigate the adverse effects of the learning crisis on Africa's economic growth. "We should ascertain that our learners are not short-changed by our education systems: the education

systems should be accessible, relevant, inclusive, and be of quality, preparing them to be fit to operate in an era dominated by constantly evolving technology. The goals and objectives of Technical and Vocational Skills Development and Higher Education and Scientific Research should be well aligned with the national goals. Hon. Mrs Dookun-Luchoomun urged participants to leverage the opportunity to hold open and frank conversations to help reimagine the education system in Africa. She argued that until Africa's youth and children receive quality education as a right, countries will have failed to prepare them to address modern-day challenges. She remarked, declaring the Triennale officially open, "It is, thus, incumbent upon us to ensure that all our children and youths access education as an inalienable right. Only then can they be better prepared to deal with the challenges of living in the 21st century."

Hon. Prof. Mariatou Koné, Minister of National Education and Literacy of Côte d'Ivoire gave the keynote speech on the topic "Africa and COVID-19: It's time to build back better and more resilient educational systems". Sharing Côte d'Ivoire's experience in the quest for quality basic learning, Prof. Koné noted that the country has not escaped the double crisis of COVID-19 and the learning crisis. National and international PASEC evaluations have shown a low level of student learning. At the same time, teachers seemed to have mastered their academic skills. In mitigation, national policies are in place aimed at improving apprenticeships, early learning has been tested through successful pilot projects based on recognized research in literacy and numeracy. Examples of successful initiatives include the GPE-supported PAPSE project to improve learning outcomes in reading and mathematics for pre-school, preparatory, and elementary classes; training of pedagogical supervisors and trainers; digital technology to collect and analyse classroom observation data; and strengthening textbook production and distribution chains. Another example is the IFEF-supported ELAN initiative for the experimentation with 10 languages; and the PEC targeted teaching programme and the Francophone initiative for distance training of teachers, IFADEM, which have developed approaches for academic remediation and distance training of thousands of teachers. In sum, initiatives implemented in 2021-2022 to make up for the loss of learning following COVID-19 are: implementation of innovative pedagogical practices; production of digital pedagogical resources; development of documents, framework, and strategy for the reform of the colleges; and strengthening of the monitoring and pedagogical supervision of teachers. Hon. Prof. Mariatou Koné called for a review of CESA 16-25, creation of synergies with existing initiatives, and taking advantage of opportunities and capitalizing on achievements for a resilient education system in Africa.

3.2. Plenary Ministerial and CEOs Roundtable Discussions

The two-hour Ministerial and CEOs roundtable that followed also focused on the overall theme of the Triennale, sharing lessons in policy and practice from the COVID-19 pandemic to inform the building of resilient and sustainable educational systems in Africa. The roundtable took place in two panels.

3.2.1. Foundational learning

The first panel for this roundtable focused on foundational learning and comprised of Hon. Agnes Makonda Ridley, Minister of Education, Malawi; Hon. Prof. Mariatou Koné, Minister of National Education and Literacy of Côte d'Ivoire; Hon. Claudiana A. Cole, Minister of Basic and Secondary Education, The Gambia; Dr Benjamin Piper, Global Education Program Director, Bill & Melinda Gates Foundation; and Dr Margarita Focas Licht, Acting Deputy Chief Executive Officer, GPE. The discussions, moderated by Dr Obiageli "Oby" Ezekwesili, President of Human Capital Africa and

Senior Economic Adviser at Africa Economic Development Policy Initiative (AEDPI), centred on (1) country experience regarding the impact of COVID-19 on foundational learning and the steps decision-makers are taking to support learner catch-up and to build more resilient education systems, (2) what it would take a country to allocate additional funds to foundational learning considering that providing quality resources and training for foundational learning requires a budget, and (3) the three immediate measures that African countries should adopt so that the Commitment to Action to improve foundational learning becomes a reality as soon as possible.

The Ministers and CEOs observed that COVID-19 amplified and exposed weaknesses in educational systems, including areas such as poor water and sanitation, across member countries; and these weaknesses are yet to be addressed. Furthermore, learning loss occurred because of the pandemic as it caught teachers flat-footed, and they did not have the choice of working from home like other professions. Despite these challenges, governments instituted changes in policy and practice to mitigate the effects of the pandemic, with some positive results. Governments put in place standard operating procedures in view of the pandemic that caused a shift in movement away from the business-as-usual approach in foundational learning. Prototypes exist that ameliorate the challenges in foundational learning and data and evidence is beginning to emerge and inform interventions in foundational learning. There is education continuity in member countries and capacity-building continues across different contexts. Additionally, there is increased use of media for learning, especially digital learning.

Going forward, the panel identified several areas that require improvements. Governments need to continue sealing the visible cracks in the educational systems through strategic interventions in foundational learning. These include the production of appropriate pedagogical resources for foundational learning, expanding learning spaces, availing, and mining data and evidence for education decision-making regarding foundational learning, continuing with the catch-up programmes such as remediation, and incorporating methodologies, practices, child-centred approaches for different learners. There is also the need to borrow from successful interventions like the education-in-emergencies approach in re-thinking education for the future and to work on the re-integration of girls (teenage mothers) into schools. Regarding teachers, it is important to provide them with practical support through coaching, invest in their welfare, improve their deployment policy – for instance, putting the best teachers at the lower levels of the education system, and address pre-service and in-service teacher education. Assessments should be used for and of learning to determine learning outcomes as this will help assess where the learners are, where they need to be, and take them there. Develop tools, including digital learning tools, to measure progress towards the set vision of Ministries of Education and to improve resilience. We must also address contextual issues of hunger and health in our interventions and make peer learning to be more strategic. To make these improvements calls for non-defensive leadership – Africa is coming of age and there is need to use evidence for improving foundational learning. Ministries of Education should spearhead the lifting of the load so others can join; they must lead the way, take the first step, and prioritize what needs to be done.

The following key takeaways framed the subsequent deliberations in the two breakout sessions, also informed by the outcomes of the previous day's side events, in foundational learning:

- A fundamental shift in learning is needed based on best practices from education programmes from countries such as Senegal, Kenya, Liberia that have been implemented at scale.

- Embrace structured pedagogy – all that matters is the teaching practices of the typical teacher in a rural classroom based on the science of teaching to double learning outcomes. Effective coaching systems can be used to help the teacher work better.

- Access better data and evidence using available toolkits to guide intra- and inter-country policy and programming dialogues to augment foundational learning.

- Prioritize what needs to be done in a context-focused way and using a systems approach, to determine acupuncture points and investigate interaction of factors – teachers and remuneration, book distribution chains, motivation.

3.2.2. TVSD and higher education

In the second panel that combined TVSD and higher education, Dr Lucy Heady, Chief Executive Officer of ESSA Africa engaged the five-members (Hon. Dr Valentine Uwamariya, Rwanda Minister of Education; Hon. Dr Monica Musenero, Uganda Minister of Science, Technology and Innovation; Mutonji Mayanda, Festo Didactic for Southern and Eastern Africa; Hon. Mrs Leela Devi Dookun-Luchoomun, Mauritius Vice Prime Minister and Minister of Education, Tertiary Education, Science and Technology; and Ms Titia Bredée, Chief Executive Officer of Nuffic) on the following issues:

- Government mechanisms that need to be put in place, including revisiting, and improving existing policies and governance issues, to create an enabling environment for improving TVSD.

- Good examples and experiences on how TVSD can become more responsive to the needs of young people, community, and the labour market.

- Examples of fiscal policies that stimulate the creation and expansion of enterprises and hence engender additional demand for labour market skills and training.

- The status of government policies, governance systems, and legal frameworks promoting national research that is African-initiated and African-led.

- What needs to be done to improve the links between the labour market and higher education institutions (e.g., universities and research institutions) for a research-informed and demand-driven skills provision.

- Examples of tangible evidence that research results are addressing/ have addressed the development needs and priorities of the communities.

Three of the main challenges the panel members cited were how to sustain the change in mindsets to mitigate the reluctance of students – and their parents to allow them – to join TVSD, the "youngness" of the TVSD industry compared with the number of young people needing attachments, and working in isolation in higher education, particularly in research.

On a positive note, there has been significant progress in linking up training institutions with industries as seen in immersion programs, the design and preparation of the curriculum, and the sharing of experiences by instructors. Significant steps have been made in setting up attachments between institutions and industry where, for example, industries are represented in the Board of Governors of TVSD and higher education institutions. There are pockets of awareness creation amongst parents of the benefits of TVSD, and pathways have been created between TVSD and university, particularly through the establishment of qualifications frameworks.

Other working areas are the setting up of production units within TVSDs to help generate income and get practical experience, emphasis of TVSD in policies such as setting of a target of 60% of students leaving secondary education to be enrolled in TVSD in some countries. In a bid to address youth unemployment, some countries are deliberately channelling investments in TVSD as it is expensive. This includes investments in infrastructure through government and development partner contributions, setting up production units within TVSD institutions to help generate income and get practical experience, and providing equipment to the institutions. Some countries have also changed the model of teaching, moving to competency-based curriculum from 2017, and are working on qualifications frameworks that will allow mobility of students, faculty, and research. Monitoring and assessment is managed by government departments based on established standards and school data management systems. There is also collaborative research linked to economic and social goals, including partnering with higher education institutions in other countries, and the strengthening of the capacity of researchers to apply for research and be competitive.

The panel identified the following requirements for improvements:

- Changing the ecosystem, for example investing in infrastructure for technical education, to attract the best students.

- Ensuring new niche careers for younger generation – cyber security, robotics, media development.

- Increasing opportunities for dialogue with industry and institutions to comprehensively address the mismatch and for industry to recognize that this is in their best interests.

- Building a love for science from earlier grades to create a pipeline and linking findings and research outputs to policy.

- Shifting mindsets by considering technical education as part of higher end skills development – not just producing plumbers and electricians, even though this cadre of skilled human power is required.

In future, possible solutions lie in introducing a new technology stream of training in secondary schools, launching challenge funds for research for collaboration between higher education and industry, and emphasizing on research that will help national development and society, particularly collaborative research with other countries.

The following were the key takeaways from the second roundtable discussions:

- Institutionalize mechanism that deliberately engage industry to be part of the education system – both technical education and higher education, with many strategies being employed to do this (e.g., industrial attachments, curricula design, instructors, and specific funds as incentives).

- Create flexible pathways between TVSD and higher education, including through qualifications frameworks as one way to build the flexible pathways.

- Enhance collaborative research across the continent, sharing of best practices, and enhanced mobility of students, faculty, and research.

- Establish a substantially large African PhD program, focused on challenges faced by Africa, such as climate change and health.

4. RECOMMENDATIONS FOR BUILDING RESILIENT EDUCATION SYSTEMS IN AFRICA

4.1. The impact of COVID-19 on Africa's Educational Systems

Discussions in the two breakout sessions focused on (1) how COVID-19 has impacted access, relevance, and quality education, especially for disadvantaged and vulnerable children, (2) the most effective solutions and technologies that contributed/ sustained learning continuity at the different education levels, (3) what COVID-19 teaches us about the ability of education systems to absorb the shock of a crisis, (4) how to make the system more resilient based on lessons from the implementation of remote education programs and policies, the role of research and indigenous knowledge in driving African innovations and solutions, and (5) the type of policies, programs, and partnerships needed to build back better, including with women and youth-led innovations.

Challenges and what is working:

The negative impact COVID-19 has had on access, quality, and equity in educational systems and the weak role research and technology have played so far in improving learning during the crisis are among the ongoing challenges. This is coupled with the difficulty of positively influencing education decision makers and making African governments more proactive and not reactive during crises. With its convening power, ADEA can bring decision makers together, as has been shown previously and now during this Triennale, to deliberate on how to address these challenges, share knowledge and experiences with partners and education actors on what is working and how to make improvements to make the system more resilient. There is need to take advantage of the unique African community setting and use local innovation and local community leaders to drive learner enrolments and retention. Community learning hubs can also be leveraged, through CSOs, to ensure children are learning during and after crises, in addition to using the radio to penetrate hard to reach areas and translating instructions into local languages. Enabling cross-country learning promotes and shares best practices and lessons learned. Available online learning strategies allowed teachers to utilize flexible pedagogical platforms – most teachers utilized simple and easily accessible applications like WhatsApp, Google Hangout, zoom, teams, etc. The videos developed by Ministries focused on, and relayed, simple concepts. Finland focused on peer-mentoring, with one mentor for every 21 teachers. The mentors provided feedback on teaching, training on ICT methods, and flexible training.

Requirements for improvement and future possible solutions:

To make these proposals work, education stakeholders should not shy away from talking about finances, assuming it is for policymakers. To sustain financing for education requires governments to be bold in looking at domestic sources and limiting over-reliance on external funding. There is recognition that most governments had weak or no contingency plans to mitigate the effects of the pandemic on education. To improve, there is need to influence decisions to strengthen policy implementation and ensure that engagements with decision makers cut across the design of interventions. Deliberate efforts should also be made to engage industries as they are part of decision makers. This is in addition to moving from absorptive capacity to transformative capacity while addressing the underlying factors influencing the learning outcomes. Because remote learning can start unexpectedly, administration systems need to be readily accessible, and additional staffing and support should be considered and factored in the planning. Furthermore, partnership should be

leveraged to sustain financing and learning outcomes, supported by scaling towards sustainable actions like teacher training. There is also the need to value and leverage informal economies that are dominant in most African economic structures.

Solutions should be mixed to sustain learning – examples were shared where solutions were accompanied by evaluation assessments to measure effectiveness of various methods. It is also beneficial to move beyond immediate efforts and tools to cope with crisis and ensure sustainable resilience. Other requirements are to redefine what is essential to teach and learn and increase access to infrastructure and proper gadgets to accelerate learning and monitor the process. Governments should also provide further support to staff and learners experiencing mental health issues.

Education actors also need to consider who influences decision makers positively, as part of solutions for the future. At the same time, they should work with private sector to mobilize resources considering distance learning especially, and embrace evidence-informed contingency planning, and use data more intensively for better planning. Having a re-entry school programme for pregnant girls is important for the continuity of their education. Creating funding partnerships with the private sector will facilitate the scaling of impact, investing in digitization and expanding TVET skills. Digital solutions could also be leveraged to onboard classroom experience into a digital app to ensure learning continues should there be a crisis. In sum, governments and education actors should think of homegrown solutions that are favourable to Africa.

Government commitment is crucial in building on practices that worked well during the pandemic, institutionalizing mechanisms that provide further support to staff and learners experiencing mental health issues, working with young start-up entrepreneurs to develop innovative solutions, and rallying all education stakeholders, including traditional and faith-based leaders, to mitigate the impact of the pandemic on education systems.

Key messages:

- Build sustainable and resilient education systems that anticipate shocks and crises by developing functional contingency plans taking cognizant of the African education context, and communicating the plans, and any subsequent modifications, to the different actors and stakeholders.

- Ensure engagement with decisions makers cut across the design of interventions. Value and leverage local leaders' influence and community learning, beside valuing informal economies.

- Promote cross-learning and empower teachers and those delivering education to be responsive and to be innovative in finding solutions and developing a reflex to be adaptive.

- Embrace a multi-sectoral approach, collaborating with other partners and sectors such as infrastructure, health, finance, and nutrition in a whole-government approach.

- Leverage community-based programs complemented by modes of learning and e-learning and the use of school-based management committees to supplement and expand what government and development partners are doing at the grassroots level.

- Initiate, where none exists, school re-entry programs, especially for girls and learners with disability, in the wake of disasters such as COVID-19 to ensure that learning does not stop abruptly.

- Leverage partnership and digital technologies to sustain learning outcomes, moving from absorptive capacity to transformative capacity while addressing the underlying factors influencing the outcomes.

4.2. Improving foundational literacy and numeracy and social and emotional learning

The first breakout sessions on foundational learning looked at the three areas of supporting children's quality Early Childhood Education and improving teaching of foundational learning. Discussions explored examples of play-based approaches that work in the African context, key ingredients in successful foundational learning programs and whether they are scalable, and examples of the types of partnerships needed to strengthen foundational learning across Africa. The second breakout session focused on assessment informed instruction to support foundational learning, including a child-centred lens. Participants in this session gained insights into country experiences regarding assessment data currently being collected (or will be collected in the future) to track learning recovery from COVID-19, challenges in assessing reading, mathematics and socio-emotional skills and possible solutions, and what it takes to move from assessment of learning to assessment for learning.

Challenges:

Five key issues were discussed: supporting and empowering teachers, scaling up and what needs to be done to institutionalize reforms, supporting peer learning in relationship with target settings, mutual accountability and partnership, and assessment.

The challenges highlighted include the existence of learners who are unable to do basic mathematical operations, despite being in school for three or more years, teachers who are ill-equipped to teach basic mathematical operations due to overly theoretical teacher training with limited pedagogical content, teacher training which focuses on higher-level mathematics content rather than foundational numeracy and gaps between teacher training and deployment. Additional challenges include the delivery of early childhood education in play centres with no formal learning taking place, the inadequate capacity of teachers and paraprofessionals who are delivering early childhood education, education systems that are based on memorization and rote learning, which does not help in creating new knowledge or own knowledge systems, huge numbers of out-of-school children, high pupil-teacher ratios (e.g. 80-100 pupils per teacher in Mozambique), low levels of foundational learning, with only slow progress being made, foundational learning for learners with disabilities, and dormant education forecast research.

For the teachers, the importance of moving from assessment of learning to assessment for learning, and the need to support teachers to make that shift, when they are pressured to conduct the curriculum with pace was cited. The changing expectation for teachers, and convincing teachers that they are responsible for children learning, also came to the fore, in addition to the necessity of training teachers to embed assessment in the instruction, and to give feedback on the spot. Teacher support and empowerment was exemplified by Zambia in shifting to an approach of teaching at the right level and by Zimbabwe in ensuring that teachers had the proper training. The two countries also concurred on the importance of the teacher's voice, making sure they have a voice in the sector dialogue. The Zambia programme was a positive example of scaling up, but the issue of limited financing in institutionalization remains. Target setting was encouraged as a way for countries to benchmark with

each other, while embracing mutual accountability and partnership, and engagements of citizens, parents, and communities.

There is need to look at the system regarding assessment, interrogating what is being assessing, and why, assessing the big picture to identify and provide evidence on what can be improved in African educational systems. Furthermore, it is important to assess the right things, making sure assessment is context specific, and conducting sufficient assessment in a context of limited resources, such as the case of Malawi that is lacking inspectors.

What is working:

The countries and partners shared some working practices and approaches. Through the Teaching at the Right Level (TaRL) approach, learners are assessed using a simple tool, regrouping them according to performance level, providing basic numeracy and literacy lessons and coaching and supporting teachers to do so. This approach has yielded big improvements in the proportion of children who can do basic mathematical operations in the case of Zambia. Progress is sustained by providing support to teachers to implement TaRL through intensive training, in-school support from mentors and support for data collection. Zimbabwe demonstrated the benefits of formalizing, institutionalizing, and consolidating early childhood education within primary schools, whereby early childhood centres were moved to primary schools and primary school extended from 7 to 9 years (including 2 years of early childhood education. The early childhood teachers and staff were trained, including formalizing the training of these teachers such that they are trained in teacher training colleges. Peer learning on the topic of foundational learning, meaning both formal exchanges and informal processes and conversations, is also a working practice. This includes having structures to facilitate such peer learning, such as the AU LEARN peer learning mechanism on basic education, and data and evidence – like in the Spotlight reports – to contribute to this process. Another working initiative is the target setting on the SDG4 indicators associated with foundational learning, working with UIS, where more than 70% of countries have set targets on the agreed indicators. Citizen action and engagement in education, in both assessment of learning (citizen-led assessment) and in supporting the solutions (e.g., learning camps, such as in Zambia) have also proved to work as a practice.

Requirements for improvement and future possible solutions:

The Ministry of Education need to be engaged from the start, with partners working with the Ministry staff to deliver foundational learning programs. In the case of TaRL in Zambia, this has built institutional capacity and ownership at the Ministry level and is crucial for scaling. There must be target setting on the SDG4 indicators associated with foundational learning and a movement to monitor these targets, seeing them as benchmarks and a basis for dialogue. Three future solutions can be considered. First is the scaling up of TaRL (in the case of Zambia, scaling is ongoing, and the the program is now working in more than 3,000 schools. Second is having an early learning policy in the case of Zimbabwe. Now in its final stages of approval, the policy includes governance, health issues, assessment, teaching and learning methods and financing as key pillars. The third area is the citizen-led assessment approach, which is a global public good. The PAL Network is planning to conduct a nationally-representative, large-scale, citizen-led assessment in 15 countries.

Key messages:

- **Accurate and accessible data is needed to track progress on foundational learning commitments.** World leaders (including many in Africa) recently endorsed a Commitment to Action (CTA) to address the foundational learning crisis during the Transforming Education Summit. This growing momentum to raise the quality of foundational learning has increased the demand for data to assess where learners are, where they need to be and what it will take to get them there. Policymakers agreed that quality data is needed to set targets and to track progress[2] in foundational learning but the capacity to collect and use education data needs to be strengthened. Reference was made to data visualisation tools to support monitoring activities, but even the most sophisticated tool relies on reliable data sources at the local level. Thus, the need to strengthen institutional capacity remains urgent. Programmes that are showing promise at scale are grounded on data sources for planning.

- **The principles of structured pedagogy must be the top priority if gains in foundational learning are to be achieved more quickly**. Successful structured pedagogy programs include structured resources for teachers and learners to use daily (such as workbooks and teachers' guides), remediation systems for additional learner support and the regular use of information from assessments so that instruction is in line with students' learning needs.

- **Teachers need ongoing support to make the shift from the assessment of instruction to assessment for instruction.** There is a tension between the pressure that is placed on teachers to move through the curriculum at the right pace and how they need to teach to ensure progress in foundational literacy and numeracy (FLN). Beyond FLN, teachers are expected to support children's social and emotional learning and safeguard their wellbeing. Programs need to focus on creating enabling conditions so that teachers can thrive. Providing practical examples to teachers of how they can assess in the classroom is proving to be helpful.

- **Mutual accountability and partnerships will maintain the momentum generated at the Triennale.** The first steps towards ministerial collaboration on foundational learning were discussed by ministers from six education systems and one sub-national education system[3]. This unprecedented expression of solidarity will pave the way for other partnerships and peer learning mechanisms to take root among education stakeholders.

Africa continues to face unprecedented challenges in foundational learning, with low reading and mathematics levels in primary schools, and it is critical to focus on pedagogy as one of the main pathways to improve foundational learning.

4.3. Remodelling Technical and Vocational Skills Development considering digitalization

Focusing on issues of the quality of TVSD systems, the evolving labour market and the skills ecosystem, and the innovations and disruptions in TVSD, this session deliberated on several aspects. They include countries' responses to TVSD teacher upgrading and professionalization, available continuing professional development for TVSD teachers and whether TVSD trainers are required to

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[2] Most notably SDG Indicator 4.1.1 on achieving minimum proficiency level in foundational literacy and numeracy.

[3] Côte d'Ivoire, Edo state (Nigeria), Gambia, Kenya, Malawi, Rwanda, and Uganda.

undertake mandatory and organized upskilling programmes, rethinking the pedagogy and teaching in TVSD to match with national and regional needs, providing learning continuity for practical skills acquisition and assessment during crises to build resilience, and successful strategic interventions in terms of gender and TVSD. Others are the mandate of technical universities, how they differ from traditional research universities, their role in the differentiation and diversification of the higher education landscape; successful examples of apprenticeship programs that can be replicated, levers and solutions for successful implementation of TVSD emphasizing financing, quality, technology, and the role of EdTech innovations in closing the skills gap in developing countries.

In response to the expert perspective by Mauritius, the shared experience from Mozambique highlighted that the country created the Ministry of Vocational and Technical Training in 2014 which, among others, is responsible for supervising vocational and technical training to offer employment opportunities to young people. The representative called for the development of public-private partnerships to improve the quality of training and the chances of professional integration of learners.

Challenges:

Some of the challenges countries are facing in improving TVSD include how to uplift the national economy by giving technical and innovative skills to learners, putting training and research at the service of a qualified workforce, offering quality training adapted to entrepreneurship and salaried employment, offering curricula that meet the needs of national markets and with international standards, improving the image of vocational training among the population, and developing income-generating training for the populations who constitute a workforce. The lack of follow-up of young people after their training to strengthen their skills and maintain their competitiveness is also a challenge, in addition not covering the whole country in the establishment of technical schools and vocational training centres, and training that is inappropriate to the needs of the productive actors.

What is working and requirements for improvement:

Positively, there is political will with the creation of a Ministries dedicated to vocational and technical training. In some countries, the diplomas issued by private TVSD actors are recognized by the state. There is also some progress with regards to gender balance in this domain, though more needs to be done. Areas of improvement include developing vocational training policies with input from stakeholders, increasing the budgets allocated to the Ministry of TVET/TVSD by the state and technical and financial partners, strengthening the capacities of teachers to international standards, and improving the trainings offered.

Three forces will impact the thinking of TVSD in the future. These are intrinsic forces (the internal demands of the country), external forces (automation in international markets), exogenous shocks (pandemics and economic changes). The focus on TVSD must consist of the policy (the best way to service different economic activities such as new specializations and credentials), program (limiting this area limits people's career choices and is an area for potential pan-African synergies), and people (TVSD needs to be culturally close to the society in which it functions to fill the needs of the society). Pedagogy in TVSD needs to adapt to the internet and the existence of online learning and training materials, with the teacher/trainer acting as intermediary and offering critical thinking. In Finland, companies and employers collaborate with training providers to develop the required qualifications to meet market demands.

Future possible solutions include implementing mobile training units, offering training and qualifying certificates, and training prisoners for better integration. Implementation mechanisms should also consider the importance of statistics in the diagnostics of needs across various TVET/TVSD indicators. Policy options need to consider multiple pathways and dual programs. Strategies for rebranding TVET/TVSD are necessary to address perception issues. This is in addition to addressing the quality of TVET/TVSD provision to drive productivity and develop competitiveness. Countries should institute targeted schemes for skilling, reskilling, and up-skilling, with participation of the private sector and industry across the board. Other measures include the portability of skills to enhance employment prospects, training of trainers, especially in industry, so that they are up to date with current labour market needs and technology, and the involvement of industry, including annual in-service training for teachers in companies. Empowerment of girls and women through employment is another important consideration, in addition to working holistically within communities to provide skills and equip women to be economically empowered by addressing social norms.

In the implementation, the key building blocks to re-thinking TVET/TVSD include policy, programmes, projects, people, and processes. In term of policy coherence, there is need for peer learning mechanisms and to address policy learning failures. Another consideration is having personalized training that caters for individual needs and prior competencies. Companies have a role to play in competency-based training with assessment and evaluation being done by both the companies and teachers/trainers. Furthermore, there is need for complementary institutional setups. Rebranding should move from doing more of the same and embrace new concepts, new equipment, new designs (e.g., inter-disciplinary portability of skills with examples in health care and hospitality). In terms of innovations, there should be training that is independent of time and place. The final point is the importance of recognizing the skills developed in the informal sector given the high numbers of African youth involved in the sector.

Regarding technology and TVSD, there is need to consider, when designing vocational programs, how to ensure that the right technology is available to support innovation in Africa. Preference should be on scaling up impactful initiatives rather than piloting, with regular evaluation of results to develop solutions in TVSD based on results and supporting apprenticeships for upward mobility. Governments should also build enabling environments for local ownership, local partnership, and local implementation, for sustainability. Creating linkages between actors through networking (government, private sector, and knowledge sector) will facilitate co-funding of TVSD. It is also important to explore affordable ways to connect with the private sector early in the planning of interventions and directly through shadowing and internships between the youth and companies. Entrepreneurship mindset is a must in every TVSD school – including practicing in afterschool clubs, having access to financing, and improving skills even before graduation. The carpentry example from Rwanda demonstrates how to promote technology and EdTech to close the skills gap with important entry points of mindset change and quality in training, while embracing digitalization in training is an important fertilizer for results.

Key messages:

- Build sustainable funding models through co-funding and joint ownership structures in addition to designing affordable innovative interventions for scale-up from the start. Finding alternative TVSD financing sources to supplement public funds and support apprenticeships is a critical step in advancing this sub-sector.

- Apply EdTech solutions to learning crafts to promote production quality, prioritize training of trainers, especially in industry or externships, and implement continuous development programs to promote upskilling, reskilling, and multiskilling.

- Ensure that technical universities and polytechnics do not mimic traditional research universities and instead emphasize practice-oriented and entrepreneurial skills development and technological innovations, coupled with providing a pathway for learners to acquire employment-oriented skills to the highest level possible.

- Promote policy coherence by learning from policy failures and contextualization to a country's situation and looking at world standards but the African spirit and country specificities.

- Change the perception of TVSD by improving the quality of its provision and attracting high performing students, prioritizing its functionality and utility, promoting the portability of skill sets and micro-credentials, and inter- and intra-differentiation instead of only vertical differentiation.

- Avoid the narrow job specification training and embrace new forms of work-integrated training while encouraging partnerships and benchmarking with African TVET/TVSD institutions.

- Forge partnerships with the private sector to consolidate competency-based training to ensure relevance of skills learnt. We will adopt a win-win approach with benefits for both firms (such as tax discounts) and learners (acquisition of workplace skills).

- Highlight the importance, and use, of quality data in the diagnostics of TVET challenges, and establish a Continental TVSD Think Tank to support the revitalization of TVET in Africa.

4.4. Reimagining Africa's Higher Education and Scientific Research

The discussion questions for this sub-theme were anchored on four topics: promoting appropriate policies and effective governance and accountability for a needs-driven and African-led national research and innovation; building a skilled labour force to drive innovation and competitiveness in Africa, and the role of Higher Education in building skilled entrepreneurs; expanding higher-level teaching, learning, and research and strengthening research-industry linkages through innovative and alternative financing options; and improving the quality assurance and harmonization of qualifications to enhance free labour and skills movement.

The expert perspectives that prompted responses from policymakers triggered the panel engagement and audience interaction on evidence of working policies and governance systems that deliberately focus on promoting national research that are African-initiated and African-led, the extent to which research results address the development needs and priorities of the community, success factors that have led to greater enrolments and uptake of scientific research in higher education institutions, and key factors, other than qualified manpower and technology, that can enable, or have enabled, research to positively impact Africa's skilled labour force in the agriculture and food industry.

The sessions also shared on how the different actors in the higher education space can play their roles effectively to promote land use and value addition; examples of alternative financing options that have been used to expand higher-level teaching, learning, and research; and how to improve the efficacy of existing initiatives on quality assurance and harmonization of qualifications while factoring transparency and trust between African qualifications frameworks.

Challenges:

The higher education sub-sector is facing difficulties in securing funding for research post COVID-19, a crisis of recruitment and retention of faculty, and resource capacity challenges, including meeting the set standard of allocating 2% of a country's GDP for research. Africa has much to do in this domain and the focus on infrastructure development, while not prioritizing research and development (R&D), has not helped the situation. Africa needs to commercialize scientific findings - during COVID-19, the continent expected to see more scientific findings to aid in providing mitigating measures based on research.

Thus, the challenges include research policies that are available without implementation plans, lack of visibility to show impact despite the ongoing research, weak linkages between the academia and industry, universities and industries not benefiting adequately from each other, research and funding not necessarily targeted to priority areas, insufficient funding for research, and not prioritizing R&D. Another challenge is the progressive cut-back of funds for higher education and the inadequate impactful research – perhaps based on no ambition to solve societal problems or impactful research not demanded by society, funding agencies may be living in ivory towers and thus account for mismatch between research expectations and research production). There is also an imbalance between impactful research and research for individual benefit resulting in "mafia-like or social media publication".

Other challenges are the poor management of research, ineffective use of research funds – poor accountability and transparency mechanisms and fidelity to set timelines, language differences across Africa as a barrier to mutual recognition of qualifications and conduct of collaborative research, and poor relationship management skills among partners and collaborators. The inter-country and multi-sectoral approach to higher education policy, programming, and practice is still in its infancy and has room for improvement.

What is working and requirements for improvement:

Despite the above challenges, there is increased goodwill among member countries to dialogue about higher education policy, programming, and practice. Member countries are also beginning to devise new ways to maintain meaningful relationships and collaborate to mediate funding deficits and improve the conduct of research. There are also positive initiatives such as the AIMS programme and RUFORUM in countries such as South Africa, Cameroun, Senegal, Tanzania, Uganda, and Ghana; the Kanagi African diaspora fellowship programme; some significant research work being done by African scholars, and many have obtained PhD degrees from different parts of the world; and the African Development Bank has a mandate to support higher education and R&D in Africa.

There is, however, a need to turn statements into actions, seize opportunities available from partners, and promote endogenous funding for a better match between research and development to improve. Universities and other higher education institutions in the region need to form strategic partnerships, promote opportunity-oriented higher education institutions and vocational training institutions, and accelerate green and digital transition as well as growth of jobs in human development. It is also important to mobilize research funding from domestic sources and from external partners cognizant of the principle of mutual accountability.

As part of possible solutions in future, capacity strengthening should only follow the identification of priority areas in higher education institutions. Research expectation should also be realigned with the reality, in terms of the quality of research products. To achieve research for impact, it will be necessary to form relevant, synergistic grass-root based, South-South collaborative and impactful research to solve the challenges in this domain, for instance, in energy and food security. Scalable research models are inevitable. Other considerations for future solutions include the following:

- **Innovative financing/funding allocation models to research:** Push for more allocation, institute and harness the spectrum of alternative funding options including differentiated higher education financing for evidence-based decision-making and monitoring impact.

- **Being intentional** about a highly skilled higher education (HE) and viewing HE as a public good to stimulate and sustain interest in it.

- **Trust:** researchers to come up with robust solutions – local researchers for local solutions.

- **Accountability mechanisms to be robust and transparent.** As part of accountability, HE declarations must be turned into action.

- **Harnessing the potential of existing opportunities such as the regional integration** process that is promoting free movement of services and labour, and mutual recognitions of qualifications to facilitate academic mobility; peer learning and leveraging local experts.

- **Leap-frogging ICT-based research approaches** using artificial intelligence and machine learning.

- **Using data** for credibility, management, dissemination, and mining for evidence-based decision-making.

- **Bidirectional approach to HE:** Using lessons learned in HE to inform basic education.

- **Tools to elevate quality of HE:** Use existing norms and standards for HE to monitor quality.

- **Internalization** of HE programmes and research and development (R&D) activities.

Finally, governments are urged to expand higher-level teaching, learning, and research and strengthen research-industry linkages through innovative and alternative financing options.

Key messages:

- Ensure policies relating to research are locally driven and responsive to needs to make scientific research a priority. Align and harmonize scientific research needs to be more linked with industry demands and to address community priorities.

- Mainstream STEM education to start in primary and secondary education to encourage STEM tracks.

- Innovate on funding options for research in higher education to inform policy, programming, and practice. This includes promoting endogenous funding for a better match between research and development while developing mechanisms that encourage inter-university exchange and for universities and industries to benefit from each other.

- Strength the capacity of higher education personnel to undertake robust research and implement programmes for skills development for Africa built on trust and mutual benefit. This

includes promoting collaborative publication while guarding against unregulated massification of publications from universities to ensure quality and accountability.

- Encourage strategic partnerships between universities and other higher education institutions (HEIs) in Africa, promote opportunity oriented HEIs and TVSDs, and accelerate blue, green, and digital transition as well as the growth of jobs in human development.

- Maintain strategic peer learning opportunities and mainstream the use of data and evidence for decision making in higher education.

- Continue to improve the quality assurance and harmonization of qualifications to enhance free labour and skills movement, while contributing to the transparency of qualifications and trust between African qualifications frameworks.

- Ensure impactful research that is linked to challenges, social needs and priorities of society, and the judicious use of limited financing available.

- Build collaboration and synergies to strengthen African-led and South-South cooperation and collaboration in higher education.

- Support or identify mechanisms – such as partnership projects, agreements, national centers, qualification frameworks – that support collaboration and mobility across countries.

4.5. Tackling education and skills data challenge in Africa

The session explored ways of creating policy-level shifts, with meaningful impact, in (a) decision making approach to be more evidence-based and quality data driven, and (b) enhancing cross-sectoral coordination and collaboration.

The panellists shared their experiences the extent to which COVID-19 has impacted access to, and availability of, quality education and skills data; lessons from previous and ongoing interventions in addressing the education and skills data challenge; and modalities for facilitating effective peer learning, knowledge exchange and evidence sharing of good practices among African countries on the production, management, and use of data on education and skills.

Other considerations are the practical steps needed to scale up the successful experiences in education and skills data within African countries, including leveraging modern tools and technologies to strengthen data systems; and areas of intervention for countries' capacity strengthening to collect and publish quality education and skills data.

Challenges:

Insufficiency of quality data, making it difficult to make guided policy and decision making, using data and evidence from sources such as global (PISA, TIMMS) and regional (SACMEQ, PASEC) tests as well as national examinations and school management to make schools more effective. Lack of data imperils financing, and how to capitalize on data. There is fragmented collection and holding of data, lack of incentives in data collection and sharing, and lack of a long-term strategy on data.

Working practices and requirements for improvement:

Examples of working practices include the Yidan African Fellows Program where local people get enhanced skills training and join an expanded network, capacity building work by ADEA in supporting African countries in support of the African Union's continental frameworks, the AU CESA/SDG4 Indicators Benchmarking initiative for joint reporting, the ADEA-GEMR Spotlight Report series, work by UNESCO UIS, ESSA Africa, UNICEF, GPE and World Bank, and other partners.

The experience from Uganda shows the challenge of availing true data, depending on the usage, and inadequate human capacity for the collection and analysis of data. The country has a district EMIS that collects data at district level. However due to ICT restrictions, this is not collated into a national data bank. However, data on gender, HIV, violence, etc. is used to make decisions and guided policy, especially during the pandemic. The Gambia suffers from the collection of quality data on education. However, the Ministry is committed to improving the situation and now have a strong EMIS and the collection, storing, retrieving of data is scheduled in the Ministry's calendar. Niger has been conducting national assessments since 2015. Before the pandemic a process was initiated to analyse data but proved to be a challenge. The results of a pilot project in the country's 4 districts shows that there is a lack of vision in data collection and use. There is also a lack of trust in the data (either falsified or there's so much data collected that it gets filled in incorrectly) coupled with data disparities in the districts. Some districts are better equipped to use technology to record data, than others which are manual. UNESCO is working with two districts (one manual and the other digitized) to improve the situation by 2023. Lessons from Kenya, Malawi, and Zambia point to the following:

- Governments need to take responsibility for the data collection plan, which needs to be part of the national budget. This is in addition to building the capacity of national assessment systems, learning from best practices from other countries.

- There is need to increase access to existing data so that data can drive policy analysis. A lot of data is being collected individually but little is used.

- It is important to have a communications plan, leverage the collective wisdom of all stakeholders, and to build a community of practice.

Policy level shift with meaningful impact needs a bottom-up approach, strong political will, commitment, and policy that facilitates the capturing and distribution of education and skills data. Domestic resource mobilization is a significant barrier for data collection. Of importance is effective coordination and cooperation with partners. The research component is also crucial for the data policy. There need to shift the discourse to the economics of data gathering. To capitalize on data necessitates going beyond the value of having data and focusing on people who can use the data, such as schools, because external persons cannot dictate how schools should run.

Key messages:

- Develop innovative ways of working with policy and decision makers in other Ministries, such as Finance, to earmark more funding to improve the use of quality data for advancing education and skills. We will ensure that the institutionalization of our actions for sustainability and resilience, while being cognizant of the different country contexts.

- Strengthen the capacity of relevant units within our Ministries, beyond the training, through peer learning, exchange of knowledge and experiences and report back sessions for the events in which our Ministries participate.

- Push for the incorporation of programs that support the provision of education and skills data as part of the national budget and institutionalize capacity strengthening programs for education institutions and national assessment systems, with partner support.

- Employ a multi-sectoral approach in addressing the fragmented collection and holding of data by developing a (or strengthening the existing) long-term strategy on data and a communications plan, incentivizing data collection and sharing through leveraging the collective wisdom of all stakeholders and building a community of practice.

4.6. Embracing digitalisation to improve the sustainable delivery of education and training in Africa

The key questions that framed the discussions in this session relate to existing country policies and strategies in the use of digital technologies for education, including remote learning, and whether countries have set a budget for ICT in education; the value addition for e-education programs at the different levels of education and success stories, challenges, and good practices in the use of digital technologies to improve accessibility and availability of learning outcomes data; the role of EdTech innovations in closing the skills gaps in developing countries by improving the quality of education delivery and enhancing resilience and achievement of all persons previously excluded, or at a risk of being excluded, with efficient remote learning systems; and examples of working partner engagements in supporting the use of digital technology in education.

Challenges:

The discussions cited lack of a robust environment and infrastructure to support digitalization as a major issue. Teacher capacity and the use of instructional technology for the teaching community, creating an enabling environment for digitalization, lack of robust environment to ensure resilience for continued education, and lack of best practice standards and guidelines for digitalization remain key barriers to embracing digitalization in education.

Working practices and requirements for improvement:

A variety of mediums are being used for dissemination or education via TV, radio, and WhatsApp. However, there is need for establishing best practices, designating an authority to implement remote teaching, and learning and skills development, as well as the development of an action plan for digitalization. Sensitization and promotional campaigns should be deployed for remote teaching and learning and in vocational training to encourage a change in mindset. Furthermore, governments should have a dedicated budget or fund to drive ICTs and to procure relevant gadgets. This will promote the practice of dedicated investments in digital transformation and infrastructure in different countries.

Key messages:

- Focus more on the education dimension when formulating policies and designing/ implementing educational technology initiatives, and link to reach and/or learning outcomes. This will help focusing how we approach digital technology in our context on how it can help achieve educational policy goals/objectives.

- Harness knowledge about grass-roots innovations leveraging technologies to achieve educational goals that are more relevant to many contexts across the continent. We will identify local solutions that can be scaled, and develop scaling strategies, to accelerate relevant deployment of digital technology.

- Adopt an ecosystem approach in EdTech to drive resilient and sustainable deployment of technologies and embrace an inclusive approach for all stakeholders to build the digital education ecosystem.

- Leverage available technologies to move beyond the digital skilling of teachers and help develop teachers as leaders that can drive the meaningful deployment of digital technology in schools and communities.

- Provide dedicated investment in digital transformation and infrastructure, learn from existing models of continued education for teachers, and benchmark toolkits and maturity models to facilitate the focus on specificities of countries with respect to education development.

It was agreed to focus on formulating policies and designing/implementing educational initiatives, and link to reach and/or learning outcomes.

4.7. Improving access and equity in education and training for vulnerable learner populations

The session focussed on (1) improving equitable and inclusive education access for children and youth in vulnerable situations, including those affected by crises; (2) investing more equitably and efficiently in education and training, including directing resources to learners with the greatest needs and setting concrete targets for more equity; (3) strengthening links between learning institutions and home for better community participation in the children's learning; (4) responding to diversity and providing for successful inclusion within mainstream education; and (5) investing in disaggregated data collection, management, and publishing to enhance targeted decision making.

Challenges:

Reduced and unequal domestic burden, unequal gender relations, affordability, infrastructure and challenges of physical access remain key challenges to improving access and equity for learners in vulnerable populations.

Working practices and requirements for improvement:

The provision of career guidance, mentoring, and coaching opportunities, encouraging stronger gender-sensitive policies and promoting accessible digital training programs, modernized learning institutions, and improved home learning environments for girls are some of the promising practices.

It was agreed to focus on most vulnerable students and continue to review the policies targeting leaving no one behind.

FAWE's case study experience in Mali and Zanzibar shows the importance of contextualizing interventions to the needs bearing in mind the geographical and regional aspects. The involvement of recipients in designing intervention projects or programs have the potential for success. At the same time, interventions need to be aligned to country-based policy environments; for instance, in addressing physical access, Mauritius has institutionalized free transport to school to overcome the challenge of distance. Feeding programmes have enhanced access in response to challenges of low-income communities and poor households. Building pedagogical interventions that are sustainable through mentorship and shadow practices was the other promising intervention that will enhance access and equity.

The experience of ILO in improving access and equity in education and training for the vulnerable people as a matter of social justice is another case of what is working. It is important to involve all stakeholders including communities, workers, and employer organizations in skills and lifelong learning development policies right from the needs identification and design phases to ensure inclusiveness and relevance for employment. Community-based learning needs should extend outreach of training to rural and remote areas where a large population of workers are based.

For VVOB, the Gender-Responsive Pedagogy (GRP) toolkit for teachers, trainers and leaders is tailored to facilitate access, equity, and quality education. The tool focuses on various interventions including access and sustained participation, improved learning outcomes that model best practice in linking TVET to the world of work, and operationalizing policies to remain relevant to the ever-changing needs of countries. There is need to continuously review policies to remain relevant with international priorities and design contextual-based policies. Investments should also target ICT to spur the desire for both boys and girls to enjoy learning as well as understand the rationale for TVET education.

Based on the experience of Building Tomorrow, it is important to use professional workers to sensitize communities on the need to enrol children with disabilities in schools to enhance access in the areas of literacy and numeracy. The role of teachers and teaching at the right level is crucial in encouraging affected children to access education.

The discussions explored innovative ways of expanding the physical infrastructure, including equipment, in tandem with increased school enrolment while targeting remote communities and girls in such expansions; what is required for a world-class digital learning solution to be accessible, relevant and useful for all learners, including those that are most vulnerable; and impactful initiatives in which technology has been used / is being used to expand access and equity in education and training to learners from vulnerable populations.

Other aspects are the targeted policies that governments have adopted and are implementing to encourage girls' enrolment in critical courses such as STEM and TVET; what it takes to equip or train career guidance counsellors with appropriate pedagogical skills; establishing strong partnerships and coordination with the private sector to improve access and equity for learners in vulnerable populations and informal workers; and leveraging existing digital and innovation policies and strategies to improve digital literacy working for learners in vulnerable populations.

Key messages:

- Continuously review policies in reference to global trends in education to remain relevant and operationalize policies and document lessons learnt to inform practice.

- Design contextualized interventions in reference to varied geographies and involve participating recipients to ensure effective implementation of projects or programs.

- Build sustainable pedagogical interventions through mentorship and shadow practices and encourage the use of the Gender-Responsive Pedagogy (GRP) toolkit for teachers, trainers and leaders to facilitate access, equity, and quality education.

- Use professional workers to sensitize communities on the need to enrol children with disabilities in schools to enhance access.

5. OFFICIAL CLOSING

The ADEA Executive Secretary, Mr Albert Nsengiyumva, thanked Hon. Mrs Leela Devi Dookun-Luchoomun, the Mauritius Vice Prime Minister and Minister of Education, Tertiary Education, Science and Technology for leading a dedicated team that worked well with the ADEA team in the organization of the Triennale. Mr Nsenqiyumva also expressed his appreciation to the partners for their support and active contributions during the stakeholder consultation meeting. Thanking Hon. Dr Monica Musenero, Uganda Minister of Science, Technology and Innovation and the Chairperson of the AU STC-ESTI Bureau and the ADEA Steering Committee, the Executive Secretary remarked, "Hon. Minister Dr Musenero, we hear you, we like your language". He observed that ADEA will send the draft Ministerial Declaration with lines of action to the Ministers and heads of delegations present at the Triennale for feedback and endorsement before finalizing and disseminating to education stakeholders, reiterated that, "we want to bring something that we can implement".

In her closing remarks, Hon. Dr Monica Musenero appreciated the Triennale as having enabled people to "be correct and not politically correct". She called on her counterpart Ministers to embrace a "business unusual approach" endorsing declarations that they intend and are committed to implement. "Let us own every single line of the declaration", she remarked. She also advocated for the establishment of thinking platforms or Think Tanks at the continental, regional and national levels as well as by partners like ADEA to enable the inflow of ideas from the best brains in the continent. "No more delegation of thinking", she announced. Calling for actors to have courage to effect change and to embark on fresh reforms in the education sectors in Africa, Hon. Dr Monica Musenero advocated for a systems approach as education is not complete until there is a viable livelihood for the people, hence the need to align all interventions and innovations to the purpose of education and to the systems. She thanked the Mauritius Vice Prime Minister and her Senior Chief Executive and the government's organizing team, and the team from ADEA under the leadership of the Executive Secretary, for the excellent organization of the Triennale. She also appreciated the valuable contributions from fellow Ministers, country heads of delegations, and partners noting, "we are finally having a coalition of thought." **Finally, Hon. Dr Monica Musenero announced that Uganda will host the next Triennale.**

Closing the three-day Triennale, Hon. Mrs Leela Devi Dookun-Luchoomun, Vice Prime Minister and Minister of Education, Tertiary Education, Science and Technology of Mauritius observed that it has been a privilege for Mauritius to host the ADEA Triennale. She recognised the contributions of speakers, chairs, moderators, experts, and panellists for the probing and fine quality of the debates and discussions. The Vice Prime Minister said this Triennale was a timely event for African education systems, taking place at a critical time in the transition period as countries move progressively out of the negative impact of COVID-19. She called on the commitment of leaders, partners, and stakeholders to the building of resilience to sustain Africa's development, as policymakers rethink and repurpose the respective education agendas and trajectories. She reiterated Hon. Dr Monica's earlier call for more action-oriented next steps, saying that the Triennale report will be in the form of a plan of action from the thinking done in the last 3 days of the Triennale. Hon. Mrs Leela Devi Dookun-Luchoomun highlighted the following takeaways:

1. COVID-19 has eroded some gains made in Africa's education, but also presented opportunities for all education stakeholders to work towards repurposing the continent's educational systems to facilitate re-entry programs and work towards improved learning outcomes.

2. It does not suffice to verbalize commitments and intents; actioning them is a much better imperative, from policy to practice. University driven research-based evidence and accurate data will be essential to address issues and inform the actioning. It also implies a re-think of the TVSD sector in building the workforce of tomorrow, and one of the immediate concrete actions is establishing the first TVSD Think Tank in Mauritius, followed by others as per the focus areas of the Triennale.

3. Education actors need to cooperate and collaborate better to collectively find solutions to the common challenges in education in Africa. "We must walk together to go far...and talk to one another". Higher education institutions have a major role to play, by working out a strong nexus with industry at the regional and continental levels and with a strong South-South bias.

4. Teachers have a lead role to play in building systemic resilience. Quality teachers make for quality schools and quality learning outcomes. To properly build Africa's human capital necessitates properly building the capacity of its teachers and educators.

5. Africa's education must, of necessity, guarantee foundational learning. The impact of the learning crisis on Africa's education system has shown that foundational learning is key in anchoring lifelong learning. It is therefore imperative to strengthen the pedagogical skills of both regular and rural teachers. Decision making at universities, among others, should bring back the narrative of having higher education for basic education.

Hon. Mrs Leela Devi Dookun-Luchoomun concluded by recalling that the Triennale has given an opportunity for the convergence of ideas. To translate these ideas into concrete action, Africa must look together in one direction as a continent, despite its diversity, because it has the same aim of building forward and stronger education systems, realizing its renaissance, and supporting its children and youth to be productive young citizens and responsible young Africans. "The way Forward is Ours to Take", she said declaring the Triennale officially closed.

6. CONCLUSION

The ADEA 2022 Triennale has reaffirmed the commitment to reform education systems on the continent, after the COVID-19 pandemic experience, to be of better quality, aligned to the real needs of Africa, and more resilient to external shocks. African Ministers of Education and Training, representatives from leading pan-African institutions and development partners restated their commitment and support for Africa's education to ensure the continent surmounts identified learning challenges, especially at the foundational level, TVSD, and in higher education and scientific research, considering the negative impacts of COVID-19. The partner side events, and subsequent plenary and break-out sessions provided vital insights on the four sub-themes and the three cross-cutting themes of the Triennale. Finally, the Ministers of Education and their delegations renewed their commitment to act on the Commitments to Action endorsed at the Transforming Education Summit in New York in September 2022, and to use the action roadmap to implement the recommendations from the ADEA 2022 Triennale for the next three to five years. The Ministers endorsed the Ministerial Declaration.

7. ANNEX

- **Ministerial Declaration**

- **Plenary Sessions:**
  - High-level Official Opening Ceremony
  - Keynote Speech
  - Launch of Spotlight Report
  - Ministerial & CEOs Roundtable 1
  - Ministerial & CEOs Roundtable 2
  - Report-Back on key takeaways from previous day's discussions - Presentation of key cross-cutting issues
  - Final Report-Back - Presentation of key recommendations to inform ADEA's strategic plan
  - Closing Ceremony

- **Parallel Sessions:**
  - Foundational Learning: Session 1 / Session 2
  - Technical and Vocational Skills Development: Session 1 / Session 2
  - Higher Education and Scientific Research: Session 1 / Session 2
  - COVID-19 Impact: Session 1 / Session 2

- **Solidarity Messages:**
  - Mr Rodger Voorhies, President, Global Growth & Opportunity Division of the Bill & Melinda Gates Foundation
  - Ms Jutta Urpilainen, Commissioner for International Partnerships, European Union
  - Hon. Ms Svenja Schulze, Germany Federal Minister for Economic Cooperation and Development
  - Ms Stefania Giannini, Assistant Director-General for Education, UNESCO
  - Dr Peter Materu, Chief Program Officer, Mastercard Foundation
  - Ms Ji-young Park, Director General, International Cooperation Bureau, Ministry of Education, Republic of Korea (ROK)

Triennale
Mauritius | 19-21 October **2022**

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Ministry of Education, Tertiary Education,
Science and Technology