

Digitalisation of Higher Education Institutions in Africa – paving the way towards the attainment of the SDGs

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Introduction

Africa recognised the potential of digital transformation before the COVID-19 pandemic. With the *Digital Transformation Strategy* (African Union, 2020), the continent committed itself to support this change in line with the *Agenda 2063: The Africa We Want* (African Union, 2013) with focus on investment in Information and Communication Technology (ICT), the promotion of the digital economy and the adoption of open and distance learning in tertiary education. However, the pandemic has given renewed impetus for digital change in higher education. The shutdowns of educational institutions brought about by COVID-19 have demonstrated that teaching and learning can be re-designed and educational institutions developed further, with the sprouting of collaborations in and across countries and continents (Robinson, 2020). The drive for digital transformation, which is now gaining momentum throughout higher education institutions worldwide, is of major significance in giving renewed stimulus to one of the boldest agendas that have been adopted by mankind, the SDGs, the *United Nations Sustainable Development Goals* (United Nations, 2020a).

Taking into consideration recent studies and published experience in the local and international context regarding cooperation and SDG implementation, the proposed paper aims to:

- (i) Explore the question as to how digital transformation can foster regional and international cooperation in higher education and contribute to the achievement of the SDGs in Africa, and
- (ii) Discuss the limitations that Africa faces in the efficient roll-out of its digital transformation and the promotion of international cooperation in higher education.

The United Nations Sustainable Development Goals – SDG 4 and SDG 17 in the focus

In 2015, the *Agenda 2030 for Sustainable Development* was adopted by the member states of the United Nations. The global community has set itself 17 goals (SDGs) for socially, economically and ecologically sustainable development. The SDGs act as a catalytic tool for global action by all nations irrespective of their development status. The goals attest to the fact that it takes holistic strategies crossing national, international and continental boundaries in order to overcome poverty and other global challenges, to reduce prevalent inequalities in society and to contribute to the betterment of health and education, for economic progress (United Nations, 2020b).

Higher education, with its inherent research, learning and knowledge-sharing, is a key area for the discovery, perpetuation and preservation of knowledge, hence creating a natural overlap between higher education and the SDGs (Edwards and Ashida, 2020).

The experience with the global COVID-19 pandemic shows that digital transformation and digitalisation provide opportunities for good education and for global cooperation, thus contributing to SDGs 4 and 17. SDG 4 aims to “ensure inclusive equitable and quality education and promote lifelong learning for all” whilst SDG 17 aims to “Strengthen the means of implementation and revitalize the global partnership for sustainable development” (United Nations, 2020c).

In the Global Education monitoring report 2020, the Director General of UNESCO states that implementing an inclusive education for all, is no longer an option. Instead, it has become a necessity in the midst of challenges faced by mankind (UNESCO, 2020). Africa's higher education institutions have a determinant role to play in enabling good, inclusive education on the continent. The SDGs, being built on the premise of international connectedness among researchers, students, governments and policy-makers at various levels, the challenge of African Higher Education institutions is to prepare staff and students for global connectivity via internationalisation of their educational and research programmes (Aarts et al., 2020).

SDG Goal 17 aims to encourage active public, public-private and civil society partnerships, thus capitalising on the experience and resourcing potential of partnerships (United Nations, 2020a). Higher Education Institutions, being both domestic and international players, can promote university-industry collaboration, whilst forging pathways for international research collaboration. Furthermore, the learning, research and knowledge-sharing that occur within the Higher Education Institutions (HEIs) put them in a unique position where "knowledge is preserved, perpetuated and discovered" (Edwards and Ashida, 2020, p. 10), thus assigning them an important role in achieving SDGs 4 and 17. This paper looks at how digital transformation can promote these goals.

Africa's Regional and Global Cooperation in Higher Education

In the last decades, there has been renewed vigour in the setting up of governmental and inter-university collaborations within African regional blocks, and beyond, as called for in the *Continental Education Strategy for Africa 2016 – 2025* (CESA) (African Union, 2015) in line with the *Agenda 2063* (African Union, 2013). A rising development in higher education in Africa is that of regionalisation which enhances the level and capacity of African universities. This promotes the tapping and strengthening of know-how within the African continent whilst drawing from Western experience.

Many higher education regional initiatives have emerged, including regional networks, university associations and centres of excellence (Aarts et al., 2020). Regional networks set up comprise that of the East African Community (EAC), which has secured the declaration of the EAC as a common higher education area in 2017, mapped the East African Qualifications framework and created several tools for Higher Education Quality Assurance, through the Inter-University Council for East Africa. The East African Higher Education Area (EAHEA) facilitates staff and student mobility through respective programmes, systems compatibility and mutual recognition (Kuria, 2020). In the Southern African Development Community (SADC), SARUA, the Southern African Universities Association, is spearheading the development of a regional identity in tertiary education, with promotion of capacity building and regional cooperation. Furthermore, the boost in pan-African cooperation, as called for in the *Agenda 2063*, is supported by several initiatives involving extra-continental partners. One example is the *Intra-Africa Mobility Scheme*, which promotes staff and student mobility between African universities. Another example is the HAQAA2 Initiative (Harmonisation of African Higher Education, Quality Assurance and Accreditation), that has been established to set up a harmonised quality assurance and accreditation system at continental level. Both initiatives are implemented as co-operations between several African and European partners under the umbrella of the Africa-EU Partnership based on the joint Africa-EU Strategy adopted by Heads of State and Government in 2007. Research-wise, a major project launched was the Higher Education Research and Advocacy Network in Africa (HERANA), which collected data of eight African Universities identified as research universities over a period of ten years and resulted in the formation of the African Research Universities Alliance (ARUA), a network of 16 research universities (van Schladwyk, 2021).

The renewed dynamism in regional and international cooperation outlined above (by no means exhaustive), implicitly tie in the aspect of internationalisation, which is also a pre-requisite for successful implementation of the SDGs, discussed in more detail later.

Digital transformation and its boost to cooperation and SDG 4 and SDG 17 in Africa

Digital transformation has the potential to boost cooperation and partnerships whilst promoting quality education thus contributing to the implementation of SDGs 4 and 17 in the following ways:

- Digital media facilitates communication between regional partners as well as partners from other continents. International travel having decreased, there is better availability of international non-African and African experts, thus strengthening multi-lateral partnerships.
- Improved communication brought about by digital transformation also simplifies project management across borders, thus facilitating partnerships, through more frequent and shorter virtual meetings with minimal disturbance.
- Professional networks in and across countries and continents are easier to promote online.
- Current published research results across borders are more easily accessed, which can lead to more research cooperation.
- Open and distance learning, which is only made possible through digitalisation, can become a major enabler in easing quality education in different parts of the world. This allows for the input and participation of more actors and more heterogeneous target groups in all stages of learning.
- Digital platforms also make access to up-to-date teaching/learning materials possible.
- Digital transformation also brings about both scale and cost-efficiencies (Cheng, 2017), with cost savings in the long run, even if additional costs for hardware and software and the development of digital literacy are offset.

As demonstrated, the digital transformation and digitalisation of higher education institutions almost automatically enable intra and inter- continental internationalisation, essential for the attainment of the SDGs (Aarts et al., 2020), with special relevance to SDGs 4 and 17.

Apart from that, partnerships enabled through digitalisation have catalysed the internationalisation process, which is, incidentally, at a turning point regarding its definition as seen by scholars and practitioners. Whilst it has been the norm to have standards regarding internationalisation set by Western models, currently there is an engaged discourse worldwide regarding its sustainability and applicability to the SDGs. Africa can here contribute to the global discourse on internationalisation and its alignment with the SDGs, by using its own legacy in ecologically-oriented philosophy and practice, and by tapping into its very cultures and traditions, as has been done in other continents (Edwards and Ashida, 2020).

Limitations to overcome

It is important to take stock of the fact that “Africa is not a country” (eLearning Africa, 2020). Due consideration needs to be given to individual countries’ specificities, given the differences in politics, economics, climate, geography, demographical structure, diversity, language, culture and history. Levels of development differ across the continent. Unsurprisingly, not all African universities can adequately perform research, teaching and community outreach tasks, as certain higher education institutions in developing countries are poorly equipped in material and financial terms, according to the UNESCO Global Education Monitoring Report 2019. This

impedes possibilities for digital transformation, thus hindering international cooperation. Apart from that, the region “continues to have the most expensive internet and would need to spend US \$100 billion by 2030 to achieve universal broadband access” (Munyati, 2020).

In addition to poor access to electricity and technology, the biggest hurdle to digitalising higher education in Africa is poor digital literacy and a lack of capacity building in this area, according to 71% of respondents in a survey conducted by *eLearning Africa* (2020, p. 21). These difficulties affect tertiary education more in less developed countries and rural areas. Higher education institutions from these areas still have difficulties in benefiting from available online opportunities. Thus, the education sectors in less developed countries and those outside major cities and capitals face challenges if they do not catch up in terms of building infrastructure and digital literacy.

Partnership-wise, cooperation with less developed African partner countries cannot always be conducted on an equal footing with more developed African nations or non-African countries. Often the available infrastructure in less developed partner countries (e.g. technical infrastructure, laboratories, timeliness and availability of research publications, etc.) hinders innovative joint research or teaching. Issues with university management, educational quality, credit transfer, amongst others, make it difficult for many African universities to compete globally and to further develop their international orientation (UNESCO, 2019).

For these reasons, South-North cooperation is to a great extent conducted as development aid. However, as outlined above, ground-breaking steps are being made towards capitalising Africa’s own potential and to also advance decolonisation in education by putting a stronger focus on intra-African regional cooperation.

Outlook

The fifty-four countries constituting Africa include seven of the world’s ten fastest-growing economies. COVID-19 has partly precipitated their competitive advantage as it hastened their “decade-long transformation from exporters of natural resources to hubs of wireless, remotely engaged commerce.” (Winkler, 2020). The communication landscape in Africa too is undergoing transformation, with the proportion of communications companies in Africa’s total market capitalisation rising from 13% in 2010 to 29% in 2020 (ibid.).

Coinciding with the implementation of Africa's Digital Transformation Strategy, many other nations and continents are accelerating the implementation of their digital transformation strategy. The 2020 Digital Strategy of the European Union is aimed at enabling its emergence as a global role model for the digital economy, whilst supporting developing economies in going digital (European Commission, 2020). The support for digitalisation in Africa is one of five strategy lines proposed to the EU parliament by the EU commission. Thus, there will be a striving for increased digitalisation in “North”-countries as well and funding, too, can be expected to foster North-South cooperation in this field.

Taken together, these aforementioned conditions provide fertile ground for internationalisation and cooperation in Higher Education from North to South and regionally. Digitalisation can thus foster increased intercontinental and regional cooperation for enhancing the quality of higher education in Africa, thus further contributing to the implementation of the SDGs.

References

- Aarts, H. et al. (2020): The SDGs and African Higher Education. In: Africa and the Sustainable Development Goals. Springer, Cham, pp. 231–241.
- African Union (2013): Agenda 2063: The Africa We Want. Available at: <https://au.int/en/agenda2063> (last access: 23.03.21).
- African Union (2015): Continental Education Strategy for Africa 2016-2025 (CESA 16-25). Available at: <https://edu-au.org/strategies/185-cesa16-25> (last access: 12.02.21).
- African Union (2020): The Digital Transformation Strategy for Africa 2020 – 2030. Available at: <https://au.int/en/documents/20200518/digital-transformation-strategy-africa-2020-2030> (last access: 23.03.21).
- Cheng, R. (2017): Getting Practical About SDG 4 in Teacher Education in Africa. Presentation at DETA Conference in Kigali, Rwanda, 23.08.2017 pp. 1–6.
- Edwards, S. & Ashida, A. (2020): Higher education in Japan: internationalization, the Sustainable Development Goals and survivability. In: International Journal of Comparative Education and Development. 22 (4). Ahead of print.
- eLearning Africa (2020): The effect of Covid-19 on education in Africa and its implications for the use of technology. Available at: https://www.elearning-africa.com/ressources/pdfs/surveys/The_effect_of_Covid-19_on_Education_in_Africa.pdf (last access: 22.03.21).
- European Commission (2020): Shaping Europe’s Future. Available at: https://ec.europa.eu/commission/presscorner/detail/en/fs_20_278%0Ahttps://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/shaping-europe-digital-future_en. (last access: 23.03.2021).
- Kuria, M. (2020): Inter-University Council for East Africa looks beyond 50 years. Available at: <https://www.universityworldnews.com/post.php?story=20201208035911947> (last access: 23.03.2021).
- Munyati, C. (2020): How Africa can lead an inclusive, cohesive and sustainable pandemic recovery. Available at: <https://www.weforum.org/agenda/2021/01/how-africa-can-lead-an-inclusive-cohesive-and-sustainable-pandemic-recovery/> (last access: 15.02.21).
- Robinson, S. K. (2020): A global reset of education. In: Prospects. 49(1–2), pp. 7–9.
- UNESCO (2019): Global education monitoring report 2019: Migration, displacement and education: building bridges, not walls.
- UNESCO (2020): Global education monitoring report 2020: Inclusion and education: All means all.
- United Nations (2020a): Multi-stakeholder partnerships and voluntary commitments. <https://sdgs.un.org/topics/multi-stakeholder-partnerships-and-voluntary-commitments>. (last access: 23.03.2021).
- United Nations (2020b): Sustainable Development Goals. Available at: <https://sustainabledevelopment.un.org/?menu=1300>. (last access: 23.03.2021).

United Nations (2020c): UN website SDG Transforming our world. Available at: <https://sdgs.un.org/2030agenda>. (last access: 23.03.2021).

United Nations (2020d): United Nations Global Compact 20th anniversary campaign overview. Available at: <https://unglobalcompact.org/take-action/20th-anniversary-campaign> (last access: 23.03.2021).

van Schalkwyk, F. et al. (2021): Science output up, but more data needed for well-directed investment. Available at: <https://www.universityworldnews.com/post.php?story=20210112144237619> (last access: 22.03.21).

Winkler, M. (2021): Bloomberg Opinion Coronavirus is helping African economies compete. Available at: <https://www.bloomberg.com/opinion/articles/2020-11-25/coronavirus-is-helping-african-economies-compete> (last access: 23.03.21).