Recent developments in higher education in Africa: partnerships for knowledge transformations

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Abstract

Purpose – This paper explores some of the recent developments and transformations in Africa's higher education.
Design/methodology/approach – It employs an extensive review of literature based on some dominant thematic areas characterizing the main trends and developments in Africa's higher education.
Findings – The paper mainly highlights the impacts of academic partnerships on these transformations, with a focus on research, postgraduate training, mobility and some new intra-African initiatives. Following the unprecedented effects of the COVID-19 pandemic, digitalization comes out as an important turning point for Africa's higher education, which should be exploited for more opportunities. The paper calls for collaborative efforts to address the challenges facing Africa's higher education for the repositioning of Africa as a meaningful player in the unfolding global knowledge society.
Practical implications – The outcomes could be useful to researchers focused on international education, policymakers and higher education leaders and international development partners working on higher education in Africa. It could also be useful for structuring future collaborations between Africa and other regions of the world.
Social implications – The paper calls for enhanced and mutually beneficial collaborations and disruption of the imbalances that have characterised North–South collaborations. It proposes some possible approaches and alternatives that could be used for redress.
Originality/value – The paper is original and relies on some of the new developments in Africa, including the impacts of COVID-19 and digitalization on the future of higher education collaborations with Africa.

Keywords Higher education, Africa, Knowledge, Transformations
Paper type Research paper

Introduction and context

The past two decades have witnessed some significant developments in Africa's higher education (Jowi, 2021). Africa's higher education sector, though an important part of the global knowledge economy, is perhaps the most marginalized (Sooryamoorthy & Scherer, 2022). Most of Africa's universities are young compared to their counterparts in the developed parts of the world. These transformations and developments have been accompanied by several challenges. The key developments include rapid expansion, which has led to one of the sharpest rise in enrolment beyond the capacities of the institutions. This has not only led to a rapid growth in the number of students and institutions but also compounded the perennial challenges of funding, diversity of programmes, access, inadequate infrastructure, weak research capacities, governance and academic quality that the sector has encountered over the years.

Some of the key reforms and transformations have been in the number and diversity of institutions, growth in student numbers, governance and quality reforms, growth in research and knowledge production, academic mobility and the now significant impacts of digitalization,

especially as a result of the impacts of the COVID-19 pandemic. While these transformations are a result of efforts by various actors, including governments and regional and continental agencies this paper focuses on the impacts of partnerships and collaborations in shaping these developments. This is within the prism of international partnerships and emerging intra-African partnerships. By 2021, there were about 1,300 higher education institutions (HEIs) in Africa, with nearly half of them private, not only showing the pace of expansion but also the rise of private higher education in Africa. Over the past ten years, students' enrolment rose from 5% to about 11% in 2021 (Mulvey, 2021), marking one of the fastest increases globally. While higher education in Africa is rather more recent than in most other world regions, the pace of change in Africa's higher education sector could be one of the most dramatic (Woldegiorgis & Scherer, 2019). It should be noted that these transformations are occurring at multiple levels, including continental, regional, national and institutional levels and are also not devoid of the impacts of an array of global developments, including internationalization.

Even with these developments, Africa's higher education still faces several challenges calling for more interventions. The perennial challenges, include inadequate funding, poor infrastructure, rapidly increasing enrolment, quality and governance challenges, the impacts of the COVID-19 pandemic and other emergencies and a raft of global pressures such as climate change and internationalization. In recent years, there have been calls for more relevance, including the decolonization of knowledge and the curriculum and the development of a higher education sector responsive to Africa's needs.

International partnerships have over the years played a key role in the development of Africa's higher education, though at times they have led to some unintended outcomes and even risks. In recent years, there have been calls for closer reflection on how equitable, inclusive and meaningful partnerships can be established for even better outcomes and to minimize the downsides of unbalanced collaborations. It has been noted that some models of partnerships have not worked well for Africans and need to be reframed to be more responsive and mutually beneficial (Ngara, 2012). Most have been characterized by a troubled history (Jackson, Mavi, Suseno, & Standing, 2018), which needs redress.

None the less, partnerships and collaborations are key to supporting African universities realize their mandates and respond adequately to growing societal challenges. It has been noted with concern that Africa may not achieve several of the Sustainable Development Goals (SDGs) by 2030. Universities, through their partnerships, have a critical role to play if Africa has to realize some of the SDGs. While this paper takes a rather general perspective, it is important, from the outset, to acknowledge that Africa is a vast continent composing 54 states with a rich diversity, several peculiarities and whose higher education sectors are at different levels of development. It should further be noted that there could be some exceptions due to the variations in the state of the higher education sector in the various African countries. The paper will thus, as much as possible, focus mainly on some main trends and developments and give some specific highlights from certain African countries and regions. The next section will thus discuss some of these key developments in Africa's higher education, some of the challenges and some prospects for the future. As the title suggests, the paper will mainly be restricted to some of the developments in research and knowledge creation through international partnerships.

Renewed commitment by international partners

Africa's higher education has suffered several years of neglect by governments and development partners, with more focus being put on basic education, especially following the now-infamous Structural Adjustment Programmes (SAPs). In recent years, there have been efforts to revitalize higher education in Africa, including through support from developing partners. Africa's Agenda 2063 and the Continental Education Strategy for Africa (CESA)

put higher education and research central to Africa's growth and development. It foregrounds the need to revitalize Africa's higher education by enhancing the research and innovation capacities of the universities, enhancing relevance and access and enabling them play their role in addressing Africa's challenges (Andoh & Salmi, 2019). These require enormous investments and support, which has led to the need to deepen collaborations with other parts of the world. These demonstrate the centrality of internationalization in the development of higher education in Africa. It has been noted that though internationalization has characterized Africa's higher education since its formative years, its manifestations and impacts in recent years have been phenomenal. The impacts include several developments, opportunities, challenges and even risks (Jowi & Sehoole, 2016). Never the less, internationalization has been taking centre stage in Africa's higher education, even though African universities still hold the short end of the stick in most of the international partnerships.

Partnerships play a key role in addressing the capacity challenges facing African universities, especially for research, innovation and knowledge generation (Maringe & Ojo, 2017; Teferra, 2013). Most African countries and regions have, however, not developed policies and frameworks to guide their engagements with other world regions in higher education in Africa. On the other hand, several developed economies and their economic communities have developed frameworks for engaging with Africa. In recent years, there seems to be a renewed commitment and engagement of these international partners with Africa's higher education. A few of them are highlighted in the next section.

Europe has played a key role in the development of higher education in Africa, beginning in colonial times and continuing in recent years. This led to the development of Europe–Africa blue prints, which spelled out how the two regions would engage in higher education and research. The Europe–Africa Forum has become the key platform for engagement between the two regions, with quite some focus on education, skills development and research. The 5th African Union–European Union Forum held in 2017 emphasized enhanced investments in research and innovations in African universities through a number of priority areas, including research and mobility of African researchers. By 2020, about 35,000 African researchers had benefited from the Erasmus-Plus programme, with the numbers expected to rise to 105,000 by 2027 (Zygierewicz, 2019). The 6th African Union–European Union Summit held in February 2022 reaffirmed these commitments and announced an Africa–Europe Investment Package to support the implementation of AU Agenda 2063, including the commitments made to education with a focus on scaling up mobility and employability of students, improving quality and enhancing access to the digital and data economies. Towards these, the EU has committed 970 million euros (Jowi, 2022).

Most EU countries have also developed programmes for bilateral engagements and supported higher education and research in Africa. The UK–Africa partnerships on research, science and innovations have also continued and even taken on deeper dimensions, especially after Brexit, mainly in the former, which are also taking root through several initiatives by the UK's Department of International Development (DFID), including the activities of the *Association of Commonwealth Universities* (ACU) and *UK Research and Innovation (UKRI),* which collaborates with several university consortia in Africa with a focus on strengthening research and institutional capacities of African universities. Further to this, the UKAid, through its *Strengthening Research Institutions in Africa* (SRIA) initiative, is strengthening the capacities of research regulatory agencies in African countries to enable them to align research funding with national development priorities. The programme, whose budget is £19,353,462, is coordinated by the African Academy of Sciences as the main African partner (Jackson *et al.*, 2022). Germany, through the German Academic Exchange Service (DAAD) and the German Development Cooperation (GIZ), has several programmes supporting higher education, especially postgraduate training, research, support for African centres of

excellence, local institutional strengthening and leadership development, amongst others. The support for the centres of excellence fits with Africa's aspirations of developing local capacities for high-level training, which would hitherto beobtained in other countries. Through DAAD, Germany is supporting postgraduate trainings tenable within African countries, a strategy to stem brain drain and at the same time foster intra-Africa mobility.

Norway also established the Norwegian Partnership Programme for Global Academic Cooperation (NORPART) to support academic cooperation with the Global South through academic cooperation and mutual student mobility, mainly focused on postgraduate training and strengthening research. The same is notable in Sweden's support through the Swedish International Development Agency (SIDA), which supports research and mobility activities with universities in several African countries. It has, however, been noted that a number of European countries have in recent years reduced their budgets for such initiatives, citing difficult economic times and some cases of changing priorities.

Africa has also had long-standing higher education partnerships with a number of Asian countries. Since 2000, China, Japan, India and South Korea have developed even stronger engagements with Africa, culminating in forums and other platforms for engagement with African governments and institutions. They have played a key role in strengthening South-South cooperation with some attempts, especially by China and India, to address or avoid some of the imbalances of challenges experienced in Africa's collaborations with the North. They claim to bring on board ethical collaborations with principles of mutuality, complementarity and political equality with their African counterparts (King, 2017). The Forum of China–Africa Cooperation (FOCAC) has committed ambitious support towards capacity building for Africa's higher education and research through scholarship programmes and exchanges. China has for several years been leading in ICTs and digital transformations in most African education systems, with their tech companies playing a key role.

Digitalization has emerged as one of the focus areas, especially at the 2021 FOCAC held in Senegal, as one way of responding to the challenges the COVID-19 pandemic posed to African societies and knowledge generation systems (Ye, 2022). Within this framework, China supports various infrastructure projects at African universities (Zhu & Chikwa, 2021). China has also established several Confucius Centres in leading African universities, not only to teach Chinese language and culture but also to undertake local training and pursue other Chinese interests. Japan's engagements through the Japan International Cooperation Agency (JICA) are mainly with Jomo Kenyatta University of Agriculture and Technology (JKUAT), the Kenya Medical Research Institute (KEMRI) and the Centre for Vocational Training in Senegal, and the engagements with the University of Zambia, with a similar focus on strengthening the infrastructure for research and capacities for postgraduate training.

Various US-based funding agencies have also played a vital role in supporting higher education and research in Africa, in addition to the partnerships between universities in the USA and their counterparts in Africa. Carnegie Corporation of New York, for instance, has invested $134.43 m in developing a next-generation group of African academics. The initiative further connects Africa's academic diaspora to African HEIs for support, mainly targeting research, curriculum strengthening and supervision. The initiative has so far led to 2,144 fellowships but focuses on just a few African countries, including South Africa, Ghana, Uganda and Kenya (Zeleza, 2019).

Most of the highlighted partnerships aim at tackling the perennial global inequalities in research by strengthening research production in African, including enhancing postgraduate training for an Africa-led and Africa-focused research agenda. The University of Ghana, for instance, has focused its international partnerships on postgraduate training and research and had, by 2018, mobilized close to $17,000,000 for research through its partnerships (Alabi & Mohammed, 2018). Such initiatives have been useful in strengthening joint research and

joint supervision, especially in areas where African institutions experience capacity deficits (Jowi, 2021; Sooryamoorthy & Scherer, 2022). The already discussed African Centres of Excellence are manifestations of efforts to develop capacities for research and postgraduate training in strategic areas of identified deficiencies and facilitate opportunities for availability of such specialized trainings within Africa. Despite these developments, which are mainly recognizable in a handful of African countries, several African countries still face serious deficiencies in their higher education systems.

Intra-Africa collaborations

While partnerships and collaborations have historically been mainly between African universities and universities in other world regions, intra-African collaborations are opening up a new trajectory that is now unveiling new opportunities for knowledge production, exchanges and internationalization amongst African universities (Jowi & Mbwette, 2017). This development has been further fueled by the revitalization of some of the regional economic communities and regional university associations across Africa. These developments are more evident within the East African Community (EAC) and the Southern African Development Community (SADC), where facilitative policy frameworks and some funding mechanisms have been put in place. These regions have, in addition, established centres of excellence within some of their leading universities, which have further fueled not only collaborations between the universities but also the mobility of students and staff. The regional policies and frameworks include efforts to harmonize the higher education systems and build quality assurance frameworks, which are important building blocks for facilitating enhanced cooperation and mobility within the higher education sector.

The developments in intra-Africa collaborations further demonstrate the fruition of the South-South higher education collaborations, which were expected to complement the other partnership and internationalization activities between African universities and those in other world regions. As a result, there are several thematic-based university networks focused on research and other activities across Africa, creating useful platforms for local engagements and even stronger and more strategic international partnerships. Some examples include the African Research Universities Alliance (ARUA) and the Regional Universities Forum for Capacity Building on Agriculture (RUFORUM), in addition to several other interesting initiatives. Organizations such as the African Network for Internationalization of Education (ANIE) and the International Education Association of South Africa (IEASA) have focused on building capacities and creating platforms for internationalization in Africa to, amongst other things, foster more meaningful engagements between African universities.

Academic mobility. Mobility is one of the main activities in internationalization and higher education partnerships. Africa has a long history of student mobility to other world regions dating back to the colonial periods. While student mobility has been growing globally, Africa is one of the most mobile regions, mainly due to inadequate capacities in most countries and the perceived quality of training attained abroad. Student mobility is one of the main activities of internationalization and is part of the main outcomes of the enhanced role of internationalization in Africa (Amutuhaire, 2020). Mobility of African students to universities in other world regions is a phenomenon dating back to colonial times and which has grown enormously over the years to the extent that some African countries had more of their students studying abroad than in local universities. It has been documented that pioneer African academics attained their training outside of Africa, especially in Europe and North America, a trend that has continued and could have even grown to higher proportions in recent years (Mulvey, 2021). Not only is it a recent adaptive strategy of African universities but also has played a key role in the development of African academics for several decades.

As part of the expansion of the higher education sector, growth in international partnerships, collaborations and opportunities opened up by ICTs has increased the mobility of African students (Woldegiorgis & Doevenspeck, 2015; Mulvey, 2021).

As a result, Africa is growing to be one of the leading regions in students' mobility. In 2020, there were about 404,000 African students studying outside their countries of origin. It is also further noted that about 5% of Africa's 20 million students have crossed borders for studies compared to the world average of 2.5 (Oanda, Jon & Blanco, 2022). The majority of the mobile students are, however, from just a handful of countries, with Nigeria, Cameroon, Zimbabwe, Angola, Ghana, Kenya and the Democratic Republic of Congo, leading the pack. The main destinations of most African students going for studies outside of the continent have been mainly France, China, the United States of America, Canada, Australia, India and Saudi Arabia. Within Africa, the main destinations for mobile African students have been mainly South Africa, Egypt and Morocco. An interesting phenomenon is, however, the rise in intra-Africa mobility, partly due to regional university collaborations and other continental and regional developments and initiatives. With its youth boom, Africa has become a new target area for international students' recruitment (Mulvey, 2021). With the move by several African countries to ease visa requirements for students and other citizens from other African countries, it is expected that academic mobility between African countries could be poised to increase. This would even be more so with the operationalization of Africa's Continental Free Trade Area (AfCTFA).

Growth in research production and postgraduate training
One of the main challenges facing African universities is the weak capacity for research, which has led to low research production in Africa (Maringe & Ndofirepi, 2017). The main motivation for African universities to engage in international partnerships has been to enhance their research capacities (Arvanitis, Mouton, & Néron, 2022). The rapid expansion of the higher education sector in most African universities, as already discussed, has led to the proliferation of several young universities with weak capacities for research. As discussed earlier, research production from Africa has remained low, at a paltry 2% of the global research outputs (World Bank, 2014; AAU, 2015), which is actually an increase from the less than 1% that has been the situation over the past years. To respond to this challenge, most higher education partnerships and collaborations in Africa have shifted their focus to research and knowledge production, especially improving research infrastructure and postgraduate training. This is in tandem with the top rationale of African universities for engaging in internationalization. The growth in research production from Africa in recent years could partly be attributed to these developments (Uetela, 2017). Developing strategic international partnerships and collaborations has now gained traction as one of the ways through which African universities can strengthen their research production (Arvanitis *et al.*, 2022).

One of the contemporary topical issues in Africa's higher education is the role of postgraduate training in turning around Africa's research, innovation and knowledge generation capacities to respond to Africa's pressing needs. While access to higher education has grown rapidly in several African countries at the undergraduate level, postgraduate training has, for some time, not been a key priority. Governments have been mainly under pressure to access and support students for undergraduate training (Jowi, 2021; Van't Land, 2016). The inability of African universities to respond to the growing challenges facing their societies has been partly due to their weak capacities for research, innovations and postgraduate training, especially at the doctoral level. As a result, Africa is still stuck at the margins of the global knowledge society (Jowi & Sehoole, 2017), thus the need for concerted efforts to enhance research and knowledge production in African universities. This

underscores the prioritization of research and postgraduate training as a key rationale for internationalization by African universities.

In recent years, opportunities and capacities for postgraduate training have begun to grow in universities in several African countries. Some of the universities have alarmingly low numbers of academic staff with Ph.D. qualifications – a paltry 20% – in some of the top African universities. This has a significant impact on the quality of graduate training. Postgraduate training in Africa has remained dismal and fragmented, leading to low research productivity in Africa. Though recent studies have noted some increase in postgraduate training in several African countries (British Council and German Academic Exchange Service, 2017; Jowi, 2021; Maringe & Ndofirepi, 2017), there are still serious challenges. Africa's *Continental Education Strategy* (CESA, 2016–2025) recognizes postgraduate training and research as critical for Africa's development and calls for immediate action to widen and enhance the quality of postgraduate training. The *African Higher Education Summit* held in Dakar, Senegal, in 2015 further emphasized the essence of research and postgraduate training in Africa and culminated in the establishment of the African Research Universities Alliance (ARUA). The few research universities in Africa are members of ARUA and have established links with other top research universities from other regions. The 2023 ARUA biennial conference held in Abuja, Nigeria, concluded that the future projection for higher education in Africa does not look good if the current conditions remain unchanged.

As part of the efforts to build the research capacities of African universities, there is a focus on training and retaining a critical mass of qualified young academics and researchers for the requirements of the universities and other sectors of society. International partnerships are one way of bridging the research capacity gap in African universities. It should be noted too that African universities prioritize the strengthening of research capacities – which in away subsumes postgraduate training – as a key rationale for internationalization. Internationalization efforts have played a key role in supporting research and postgraduate training in African universities, as already highlighted in earlier sections of this paper.

It has been noted that most postgraduate students in African universities drop out or take much longer to complete their studies, largely due to challenges of funding, supervision and poor support systems. As a result, several African universities and governments have put efforts into enhancing research capacities and postgraduate training (Sooryamoorthy & Scherer, 2022). Deliberate investments in research by African universities include several African universities with significant efforts being demonstrated by University of Ghana, the University of Addis Ababa, the University of Nairobi, the University of Dar es Salaam and the University of Ibadan, amongst others, have prioritized focused investments in research and postgraduate training hinged on international partnerships and collaborations (British Council & German Academic Exchange Service, 2017). As such, there is growth in postgraduate training opportunities and research capacities in several African universities (Andoh & Salmi, 2019).

There are also new networks such as the *Alliance for Accelerating Excellence in Science in Africa* and the *African Academy of Sciences,* which are dedicated to supporting and providing mentoring and networking opportunities for young African researchers, in addition to linking them to other global networks. The same is the case with the *Africalics,* established in 2021 with the aim of networking Africa's young scholars in innovation and development. The *African Network for Internationalization of Education* (ANIE), in collaboration with OBREAL Global, is currently implementing an EU-funded programme bringing together African and European universities to exchange experiences on how to utilize the opportunities of internationalization and digitalization to support research and postgraduate training in Africa. Most important is the need for African governments to fulfil their proposed commitment to dedicate at least 1% of their GDP to research (Zormpa *et al.*, 2021).

In addition to the above, an area that still needs more effort and support is the development of Africa-based academic journals. While research outputs from Africa are improving, publications by Africa's top researchers are in international journals mainly located outside Africa. Africa's research publications therefore mainly target a foreign and international audience and are thus not so accessible to African audiences. Addressing the challenge of outlets for research publications from Africa is thus imperative since the current situation hinders the visibility of research and knowledge production from Africa. It has been noted that one of the challenges facing African researchers is deciding where to publish their research outputs, largely due to the structural barriers associated with the so-called international journals. This discourse also needs reconsideration to reconsider the embedded view insinuating that African journals are not necessarily international. Noting that some of these international research projects further support the development of the academic writing skills of emerging African academics, this should be.

Emergence of regional centres of excellence
The Continental Education Strategy for Africa (CESA) recommends the establishment of African centres of excellence as one of the ways of strengthening research production in Africa, strengthening African institutions and responding to the perennial challenge of brain drain. This is in addition to the emergence of African Centres of Excellence located in some leading African universities. These centres have promoted a number of internationalization activities, especially student and staff exchanges, joint research postgraduate training and the resulting improvement of academic quality in the participating institutions or programmes. Most of these centres are supported by international development partners, with a positive effect on the development of the capacities of African universities and the strengthening of quality local training, but with the risk of becoming a new way of stemming brain drain. Several such centres have been established in different African universities through initiatives such as the Pan African University, African Higher Education Centres of Excellence (ACEs), supported by the World Bank and some by the German Government, amongst others. In the East African region, under the auspices of the Inter-University Council for East Africa, several centres of excellence have been established, including those targeting skills development. They have provided an important opportunity for the regional universities to develop consortia for more strategic collaborations with partners in the North.

Developments in continental and regional quality assurance
Quality assurance is another key challenge facing higher education in Africa. It has been noted that some African countries have yet to put in place a quality assurance agency. Since 2018, the African Standards and Guidelines for Quality Assurance in Higher Education (ASG-QA) have been developed as part of the Pan African Quality Assurance and Accreditation Framework (PAQAF). These are parts of efforts to provide a continental framework for harmonizing higher education quality assurance systems and promoting compatible approaches recognized by the African Union. They provide a unified basic framework that is general enough to take into account the diversity of national contexts while ensuring comparability, and they aim at supporting HEIs and quality assurance agencies (QAAs) in developing adequate internal and external quality assurance systems and practices that correspond to international good practice. Several African countries and regions are undergoing quality reforms.

There are also efforts at the continental level to enhance the quality of higher education in Africa. Some regional economic communities, such as the EAC, have also made efforts at developing regional quality assurance frameworks and supporting member universities to establish quality assurance offices, in addition to offering training to institutional quality

assurance officers. More countries are setting up quality assurance agencies, with several platforms coming up for these agencies to share experiences. Currently, the EU is supporting a continental quality assurance initiative, including efforts to set a continental quality assurance accreditation agency for Africa. The main objective of the EU-funded Harmonization, Quality Assurance and Accreditation in Africa (HAQAA) is to contribute to and support the harmonization of higher education programmes and the creation of a revitalized and competitive higher education sector in Africa through enhanced intra-African cooperation. This could go a long way towards supporting and facilitating the other intra-African collaborations already discussed. It includes a number of tools to enhance transparency and is being implemented by OBREAL Global, the African Union and several regional partners. There is growing recognition of the role of quality assurance in facilitating higher education partnerships, collaborations and even internationalization.

Decolonization of African higher education
Nearly all African countries inherited the education systems and even institutions established by their colonial masters. This colonial heritage has continued to shape higher education and research in Africa for several years. These systems did not adequately incorporate local knowledge and African languages as they were they perceived them as inferior (Ngara, 2012) and instead promoted western knowledge and languages, which they viewed as universal and superior. African universities have continued to follow the western values of liberalism, commercialization, competition and profit-making. In addition, western knowledge, epistemologies and worldviews are embedded as lenses for engaging with knowledge, even in African contexts where they largely do not fit (Ngara, 2023). In recent years, there have been calls for the decolonization of African universities by various stakeholders. *The Rhodes Must Fall* student protests in South Africa, calling for curricular reforms and changes in some language policies, are one of the recent examples. It should, however, be noted that not all western advances may be suitable for African situations. As discussed at the onset, Africa is part of the unfolding global knowledge village that calls for exchanges of knowledge and other useful practices. The decolonization of African universities could opens up several opportunities for partnerships (Mohamedbhai, 2017). The curriculum for most academic areas in African universities needs to be revised for relevance to local contexts, with African languages developed, invested in and even used in academic and research undertakings. This is, however, not to mean that global aspects need to be discarded, as African youths must not only be African citizens but also global ones.

The implications of digitalization
The digital divide between Africa and the developed world regions has been one of the main hindrances to the meaningful participation of African universities and researchers in the global knowledge society. The unprecedented COVID-19 pandemic has left an important turning point in Africa's higher education. It unveiled the limited capacities of the universities to operate and respond meaningfully to such crisis situations, especially the challenges faced in turning to online learning during the pandemic. It left an important realization with far-reaching impacts on the core mandates of the universities, especially, teaching, learning, research and outreach. In addition to compounding the challenges facing universities, the pandemic laid bare the fragilities of HEIs (Boshoff, Wiafe, & Ayoo, 2021). While it aggravated the challenges and vulnerabilities of the institutions, some institutions took advantage of the situation to develop new ways of strengthening their teaching, research and societal responsibilities. Most African universities have been compelled to adopt new ways of teaching, learning and research (Mbiydzenyuy, 2020), largely through the adoption and integration of ICTs and other digital technologies. According to Dahlberg, Higginbotham, and National Academies of Sciences, Engineering, and Medicine (2021),

some African countries, such as Kenya, Mauritius, Rwanda, South Africa, Ghana and Senegal, are making strides in digital transformations by enhancing access and internet availability for most citizens, especially within the education system.

In addition, it has unveiled new possibilities for strengthening research and postgraduate training. It eased the possibilities of joint supervision, joint research, online and blended training and access to vast online resources for African universities that were mainly cut off from other global knowledge networks due to connectivity barriers. These developments gave rise to even new possibilities for deepening academic partnerships and collaborations with other world regions. It has further opened up opportunities for African researchers and early-career researchers to opportunities and knowledge resources that were hitherto largely out of their reach. These include participation in international conferences and seminars, international academic networks, accessing international knowledge resources and funding opportunities that could support their research and academic careers. This has reduced some of the barriers and challenges that African universities researchers have faced for several years, especially in being part of the global knowledge dynamics.

While the potential of digitalization in higher education, especially in responding to internationalization, is viewed as one of the ways of possibly stemming brain drain from African universities and negating the efforts being made in capacity building through various internationalizations (Amutuhaire, 2020), it could also escalate the situation due to the many opportunities and possibilities that it would unveil, especially to young, talented graduates from Africa. With regard to postgraduate training, digitalization presents possibilities for joint research, joint supervision and access to knowledge resources in other parts of the world, amongst others (Jakoet-Salie & Ramalobe, 2023; Chasi, 2019).

An important implication of this digital transformation is the urgent need to equip the new generation of African researchers with the competencies and skills needed for navigating the digital environment and addressing Africa's transformations. The new and emerging realities of work and research including working from home which is also now slowly creeping into some African contexts brings realities that the work and research environment in most universities has not been accustomed to. Peeping into the future, these developments in digitalization could bring forth several developments, especially in revolutionizing research and innovation in Africa and the development of the institutional capacities of African universities. In addition to enhancing the quality of research, education and training, it could further expand access, transform and even lower the costs of accessing higher education opportunities and for research.

The international partnerships being developed by African universities in recent years, especially after the COVID-19 pandemic, demonstrate more support for the deployment and integration of ICTs and digital technologies into teaching and research in African universities (Muftahu, 2020). This is evident in many new funding programmes focused on Africa and is aimed at enabling African universities to take advantage of academic opportunities and resources available globally and to not only deepen their international collaborations but also use these opportunities to bring in needed transformations in their institutions and societies. It would be possible that digitalization will impact and shape the future of higher education in Africa in significant ways, including aspects of research, post graduate training and internationalization in the coming years.

Conclusion and thoughts for the future

As we progress into the future, Africa's higher education is at an interesting crossroads. It is undergoing several transformations, which presents it with several opportunities and a time when it continues to grapple with serious perennial challenges and new emergent ones. As has been discussed in the previous sections, the higher education sector in Africa has

undergone several transformations in the past few years. These transformations and changes have a bearing on the future of higher education in Africa. Though the previous sections have mainly focused on some of the progress being made, they also highlighted some of the challenges that continue to stifle the progress being made.

Despite the positive contributions of international partnerships and collaborations elucidated above, these partnerships at the same time confound Africa's higher education with risks and challenges, with the main ones being the brain drain, curricular and policy influences and growing competition, in addition to some of the negative implications of the rankings. The growing debates on the decolonization of knowledge and curriculum in several African countries and the role of knowledge generated by African universities in the global knowledge economy (Jowi, 2012; Moshtari & Safarpour, 2023).

Some of these challenges and risks negate some of the efforts being made and thus need redress. Academic rankings, for instance, have not worked well for African universities and have even come out as a risk to the internationalization and research production efforts in African universities (Kiraka, 2020). Some African universities have thus been concentrating their efforts on the rather pointless and fruitless efforts to perform better in the rankings at disadvantage to the needs of other contexts and realities of their institutions (Teferra, 2021). As Ndofirepi (2017) argues, rankings could be misleading to African universities and drift them from their key mandates while they do not take into consideration the contexts of African universities.

Funding remains a serious challenge for African universities amid the growing numbers of young Africans seeking university education and the constrained institutional capacities. Most African governments have not committed sufficient funding for research, postgraduate training and the expansion of the sector. Funding for research, for instance, has been mainly from international sources and at times restricted to areas of not so much relevance to Africa's needs as those of the funding agencies. These and the growing imbalances in partnerships and collaborations, as Daniels and Gebhardt (2021) argue, leave African universities as captives of western knowledge epistemologies.

If well facilitated and utilized, digitalization would open enormous possibilities for African universities, including in research and knowledge production. The needed infrastructure and human resource capacities need to be put in place urgently for African universities to benefit from the opportunities (Spagnolo, Gautier, Seppey, & D'souza, 2020, p. 3). This and Africa's youth boom and their adoption of new technologies portend to make Africa a key player in the global knowledge economy in the coming few years. It is the opportune time to turn around the research capacities of African universities and to reposition African universities to contribute meaningfully to the global knowledge society and develop solutions to the growing challenges of African societies.

The developments towards online and digital learning have opened up opportunities that could open up access, lower costs of post graduate training, enhance the efficiency of supervision, access postgraduate students to enormous resources for their studies and even open up more possibilities for employment. Universities that will invest adequately and take advantage of these developments for their postgraduate training will make significant leaps. These technologies also create avenues for enhancing collaborations with international partners and even more funding opportunities. In this vein, African universities need to deliberately invest in ICTs and digital technologies to support research, postgraduate training and other key mandates of the institutions. In this regard, the development of viable policies and strategies for postgraduate training, ICTs and digitization, amongst others, would be imperative. These have also brought new challenges to postgraduate students.

The new initiatives by international development partners to support Africa's higher education and research need to focus on and take cognizance of Africa's needs and attend to the asymmetries and imbalances associated with international partnerships based on the

implied superiority of western knowledge epistemologies. For better outcomes, these need to change to enable African universities and scholars to have their rightful place and make their commensurate contributions. Africa's higher education needs to secure its rightful place in the unfolding global knowledge economy and also respond to Africa's developmental requirements. Africa is at the threshold of an important turn-around moment in which the higher education sector will play a key role. It has already been noted that the SDGs, Africa's Agenda 2063, and most national blue prints may not be tenable without the universities playing their rightful role. African governments may thus not have other viable options but to sufficiently support their higher education and research institutions. As this paper has documented, the role of international development partners has been crucial and will remain crucial in this endeavour. The noted renewed commitment of various international development partners to support Africa's higher education and research is an opportunity that African institutions need to strategically utilize to enhance their capacities.

The emergent intra-African higher education and research initiatives, including the African Centres of Excellence and academic networks, need support not only for their role in strengthening Africa's higher education research capacities and stemming brain drain but also for the opportunity they provide for repositioning African universities, especially for their global engagements. It is notable that this international space brings forth several enticing possibilities, though some may not be necessarily useful to African universities at the moment. An example is the challenge and shift of focus that the rankings pose to African universities. There are also several leaking gaps that African universities need to fill, including strengthening governance, accountability, ethics and academic quality. Notable steps are already being undertaken on these, but they need to be hastened for sustenance and to take advantage of the gains already made in other areas.

The rapid expansion of Africa's higher education sector, Africa's youth, and the growth in mobility of African students would make Africa and interesting region to watch, especially with regard to the future of internationalization. It should also be worth mentioning that research production from Africa is beginning to take a path of steady growth. With the focus on the development of more young researchers in Africa, this could be poised to increase. Digitalization comes out to be the single most critical factor that will shape many facets of Africa's higher education for several years to come. The emerging intra-Africa collaborations need support and sustenance, as they would contribute to the positioning of African universities to better address their challenges and those of their societies while at the same time taking advantage of emerging global opportunities. In tandem with this, the policy context needs to be energized to provide frameworks for operationalizing these initiatives. These should emphasize mutuality, with the understanding that each side brings something on board.

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