Academic Collaboration in Africa and Asia: Current Status, Challenges, and Emerging Trends and Strategies

Yamina El Kirat El Allame, Bie Dunrong, Hajar Anas, Ma Jie, Tibelius Amutuhaire, Huang Yifan, Oumaima Elghazali and Yu Jingran

Abstract

South-South cooperation has garnered much attention in recent times among states, policymakers, and academics and its scope is growing to encompass economic cooperation and health, education, research, and development initiatives. This article examines the current status of academic partnerships between institutions in Asia and Africa, the challenges confronting them, and the emerging trends and strategies. Practical examples are provided to showcase the current practices and challenges in each region. The article also highlights academic cooperation experiences during the COVID-19 pandemic and identifies the emerging trends and challenges in academic collaboration in Asia and Africa in the post-pandemic era. It proposes strategies for future North-South, North-South-South, and South-South academic collaboration. During the pandemic, academic cooperation in teaching, learning, and research across borders has demonstrated resilience and sustainability. Increased opportunities for collaboration within, between, and beyond Asia and Africa are being provided by technology-enhanced collaborative modes. However, the digital divide within and across the two continents will impact the future modalities of academic collaboration.

Résumé

La coopération Sud-Sud a suscité beaucoup d'attention ces derniers temps parmi les États, les décideurs et les universitaires et sa portée s'élargit pour englober la coopération économique et les initiatives de santé,

ABOUT THE AUTHORS: YAMINA EL KIRAT EL ALLAME, email: yelkirat@gmail.com, HAJAR ANAS, and OUMAIMA ELGHAZALI, Mohammed V University, Morocco; TIBELIUS AMUTUHAIRE, University of Bayreuth, Germany; BIE DUNRONG, HUANG YIFAN, and YU JINGRAN, Xiamen University, China; and MA JIE, Coventry University, UK.

d'éducation, de recherche et de développement. Cet article examine l'état actuel des partenariats universitaires entre les établissements d'Asie et d'Afrique, les défis auxquels ils sont confrontés et les tendances et stratégies émergentes. Des exemples pratiques sont fournis pour présenter les pratiques et les défis actuels dans chaque région. L'article met également en lumière les expériences de coopération universitaire pendant la pandémie de COVID-19 et identifie les tendances et les défis émergents de la collaboration universitaire en Asie et en Afrique dans l'ère postpandémique. Il propose des stratégies pour une future collaboration universitaire Nord-Sud, Nord-Sud-Sud et Sud-Sud. Pendant la pandémie, la coopération universitaire dans l'enseignement, l'apprentissage et la recherche au-delà des frontières a fait preuve de résilience et de durabilité. Des possibilités accrues de collaboration au sein, entre et au-delà de l'Asie et de l'Afrique sont offertes par des modes de collaboration améliorés par la technologie. Cependant, la fracture numérique au sein et entre les deux continents aura un impact sur les futures modalités de collaboration universitaire.

Introduction

Globalisation has brought the world together and opened up the international stage. Collaboration in all fields, particularly education, is no longer a choice but an obligation. South-South or what is referred to as 'Global South' collaboration has recently received much attention not only among policy makers but also among academics.

Academic collaboration in teaching, learning and research across borders has demonstrated resilience and sustainability during the COVID-19 pandemic despite intensified geographical tensions and disrupted physical mobility. Collaborative online international learning and virtual knowledge exchange have supported and sustained academic collaboration between individuals, institutions, countries and regions. Such modes not only offer more opportunities for collaboration within, between and beyond Asia, Africa, and other parts of the world, but also highlight the challenges raised by the digital divide within and across these regions, potentially reshaping future modalities of North-South, North-South-South and South-South academic collaboration.

From the perspective of higher education development, Asia and Africa are often associated with the term 'Global South' and framed as underdeveloped regions in contrast to the 'Global North', considered a

'developed' region. This discourse has shaped Asia and Africa's 'catch-up' mindset and strategies for international academic mobility and collaboration. For a long time, Asian and African countries such as China, India, Kenya, Nigeria and Morocco have been among the top senders of students to the Global North, especially the United States (US), United Kingdom (UK), Australia, France and Germany to 'learn from them' in terms of science and technology. However, the landscape is shifting with Asia's growing socio-economic development and new policy directions in the Global North. This has resulted in student mobility becoming "multidimensional" (Cheng, 2021). Furthermore, the collective scientific and academic initiatives that emerged to tackle the global health crisis in the form of the COVID-19 pandemic could transform the modes of South-South and North-South academic collaboration. It is against this backdrop that this article discusses emerging trends and strategies for academic collaboration in Asia and Africa and their experiences in this regard during the pandemic, as well as the challenges confronting such collaboration in the post-pandemic era. The pandemic highlighted the opportunities offered by the new technologies for academic collaboration, especially for the process of internationalisation at home, which can reduce the cost of mobility and contain the academic brain drain. New tools such as virtual exchanges and collaborative online learning offer opportunities for more collaboration between Africa, Asia and the rest of the world.

The article is based on a systematic literature review, with relevant papers selected and their findings checked for validity, and methodically synthesised. It reviews the most recent discussions on the 'changing' modes of South-South and South-North academic collaboration, and the developmental status in Asia and Africa to legitimise how and why such collaboration needs to change or is changing. Practical examples are presented and the challenges and emerging trends during the COVID-19 pandemic that will inform future collaboration strategies are highlighted.

Overview of Higher Education in Africa and Asia

This section provides general background information on higher education in Africa and Asia, focusing on its organisation and structure, its evolution and the current state of affairs.

Higher Education in Asia

The average global gross enrolment ratio (GER) in higher education has increased rapidly in the past 40 years, from 12.39% in 1980, to 29.40% in 2010 and 40.24% in 2020. Higher education has experienced phenomenal growth in all parts of Asia. East Asia has the largest number of students, as well as the most world-class universities, and a higher proportion of students in science, technology, engineering and mathematics (STEM) fields (Woetzel et al., 2015). Japan, Singapore, South Korea and other Asian countries have a relatively well-developed academic system. According to the QS World University Rankings 2021 published by Quacquarelli Symonds, nine of Japan's 775 universities fall within the Top 200; while seven of South Korea's 169 institutions and two of Singapore's 13 also make the list. As the most populous countries in Asia that are also undergoing rapid economic development, China and India experience the highest demand for higher education. Emerging economies such as Indonesia, the Philippines, Vietnam, Thailand and Malaysia are also expanding their higher education sectors. Together with the diverse programmes on offer, this has meant that more and more young Asians are entering tertiary education within or beyond their own countries, creating opportunities to shift trends in student mobility and modes of academic collaboration.

Higher Education in Africa

Higher education in Africa is closely bound to the history of the continent. Most of today's academic institutions were established by the former colonial powers and organised in line with their models. Indeed, higher education in Africa is the product of colonial policies (Altbach and Selvaratnam, 1989; Lulat, 2003). The French and British maintain substantial influence especially in terms of the medium of instruction and communication.

The nature of higher education in Africa differs from one region to another. West, East and Central Africa are far behind Southern and North Africa in terms of the number of institutions, students and staff, and institutional rankings. Seven of the top 11 universities in Africa are in South Africa and four are in Egypt. The number of higher education institutions also differs. Nigeria leads with 260, followed by Tunisia at 204, Morocco with 153, Kenya 129, and South Africa at 123, while Djibouti, Niger, Central African Republic, Equatorial Guinea, Comoros, and Réunion each have one university (Statista Research Department, 1 February, 2022).

Measured against international standards, Africa is the least developed region in terms of higher education institutions and enrollment (Teferra, 2004). The QS World University Rankings 2021 rank only one South African university, the University of Cape Town (at 240) among the Top 300 World universities. Seven other South African universities and three Egyptian institutions rank within the World Top 1 000. The lowest rankings are occupied by African universities. The ten universities from the Global South ranked among the World Top 100 universities are all from Asia, namely China, Japan, Hong Kong and Singapore.

Coupled with privatisation and marketisation, the medium of instruction and the funding models of universities in most African countries are real obstacles to their visibility and a hindrance to international collaboration. Unstable funding mechanisms and very limited funds for research give rise to limited publications and hence, visibility. This was highlighted during the COVID-19 period when many private universities closed their doors, while their public counterparts which are state-funded were able to conduct research and were involved in increased community engagements. Finally, cultural, historical and sociological factors have resulted in most African higher education institutions being characterised by gender imbalances. These challenges notwithstanding, it is recognised that higher education is a key sector for the development of Africa, and efforts are being made to improve its performance.

Literature Review

This section presents a brief review of the most recent discussions on the 'changing' modes of South-South and South-North academic collaboration, with a focus on Asia and Africa. The review reveals that capacity building is the key theme of North-South partnerships, particularly in relation to professional skills development (Cummings, Bergquist, Boateng, Phoxay, and Stadler, 2021; Haji et al., 2021) research capacity (Harris, 2020; Martinez and Sá, 2020; Weinrib and Sá, 2020) and knowledge transfer (Tamaldin et al., 2020). Capacity building of medical and health related professionals is a major sub-theme (Cummings et al., 2021; Haji et al., 2021) as is training of future leaders in the Global South and Southeast Asia and Africa (Borg, Borg Axisa, Ophiyandri, and Hakam, 2020; Huda, 2020).

Capacity building collaboration projects are often led by Global North countries. For example, the Erasmus+ United Capacity Building Higher Education initiative for knowledge transfer to Southeast Asian countries such as Malaysia, Indonesia, Thailand, and Africa aims to bridge the

knowledge gap between the Global North and South in terms of the 4th industrial revolution (Tamaldin et al., 2020). From 2014 to 2020, 62 Asian universities, including 30 in China, 24 in India and others in Indonesia, Malaysia, Sri Lanka, and Thailand participated as full host partners in 34 selected or re-selected Erasmus Mundus programmes. A total of 242 Asian organisations, representing 13 countries, participated in these programmes as associate partners during the same period (Campus France, 2021). African universities in Benin, Ethiopia, Kenya, Morocco, Nigeria, Tunisia, etc., have also been involved in Erasmus+ programmes.

The German Academic Exchange Service (DAAD) supports African higher education institutions' labour market and employability orientation through its Entrepreneurial Universities in Africa (EpU) programme. Other organisations in the north have partnerships with different African universities. However, North-South collaboration has been characterised as an unequal relationship (Harris, 2020; Martinez and Sá, 2020; Molosi-France and Makoni, 2020). Colonial power relations continue to shape understandings of the world and knowledge production. The "wealthier partner [often from the Global North] ... dominates the collaboration processes and activities" (Molosi-France and Makoni, 2020). Martinez and Sá (2020) note that the most frequently cited researchers in Brazil are those who actively co-authored with Anglo-American-Australian researchers during international mobility in their early careers.

New South-North or South-South-North partnerships for knowledge co-production are being established to challenge the inequality of the global knowledge production system. Weinrib and Sá (2020) cite the case of a Norwegian South-South-North partnership model that does so by prioritising Global South researchers' needs and emphasising participatory decision-making. Quiroz-Niño highlights the need for 'knowledge democracy' in research projects between academics in Global North and Global South countries and adds that this is achieved by working together to define relevant concepts and establish objectives and research questions in order to gain multiple perspectives.

Appreciation of multilateral perspectives is becoming an emergent discourse and practice in both North-South and South-South academic collaboration. An example is co-authorships between Australian and South Korean researchers that are facilitated by the US or China (Choi, Lee, and Zoo, 2021).

Independent South-South collaboration is also growing, with inter-

regional efforts motivated by the need to share knowledge and expertise among governments, organisations, and individuals in countries that have common objectives and can relate to one another's challenges, instead of adopting non-contextualised solutions from developed countries (Lebel and McLean, 2018). South-South academic collaboration is crucial to the overall growth of the Global South. However, research funding is extremely limited in developing countries, where researchers also confront other constraints (Macgregor, 2013). Funds allocated to universities and higher education institutions in the Global South comprise a far lower percentage of Gross Domestic Product (GDP) than the more than 2.46% of GDP allocated in the Global North (Rethinking Research Collaborative, 2018).

Connected by a shared vision, South-South cooperation emerged as a result of a desire to sustain growth and to 'share the burden' as developing countries, especially after the 2010 global financial crisis (Fiddian-Qasmiyeh and Dakey, 2018). The following section highlights experiences and examples of intra-and inter-regional cooperation within and between Asia and Africa, demonstrating the trend of diverse multilateral academic collaborations between South-South and South-North countries.

Academic Collaboration within, between and beyond Asia and Africa

Economic globalisation has made it more urgent for Asia and Africa to consider how to secure their future by constituting themselves as a regional bloc in the same manner as the European Union (EU) (ADB, 2008). Indeed, as it moves towards a more regionally integrated economic system and comprehensive free trade zone, Asia will consider regionally convertible educational credentials across colleges and universities. This would have implications for wider international cooperation. More attention is being paid to academic relations and knowledge exchange opportunities with partners in other countries, particularly in Asia and Africa. The following sub-sections discuss each region in turn.

Academic Collaboration within Asia and Africa

Within Asia, academic mobility and collaboration is growing between East and Southeast Asia. In 2016, China and the Association of Southeast Asian Nations (ASEAN) formulated the China-ASEAN Education Cooperation Action Plan 2016-2020. The Guiyang Statement issued by the China-ASEAN Education Ministers Roundtable Conference in 2010

committed to joint training of Master's and doctoral students and high-level talent exchanges. Chinese universities such as Xiamen University, Ocean University of China, and Guizhou University, etc. signed cooperation agreements with universities in ASEAN countries for joint training of Master's and doctoral students and inter-university exchanges for the establishment of high-level talent think tanks. Examples include the Cooperation Agreement between Xiamen University and Singapore's Nanyang Technological University (NTU) (2006), the Inter-University Cooperation and Exchange Agreement between Guizhou University and Laos National University (2009), and the Cooperation Agreement between Ocean University of China and Prince of Songkhla University, Thailand (2019). By 2020, China had established mutual recognition systems for higher education qualifications, degrees and diplomas with 41 countries in the region, including ASEAN countries, Thailand (2007), Vietnam (2008), the Philippines (2009), Malaysia (2011) and Indonesia (2016). This provides an institutional guarantee for overseas students, postgraduates and advanced scholars to study in China and relevant countries.

The recent Fifth ASEAN Plus Three Education Ministers' Meeting issued a joint statement that points to stronger partnerships between ASEAN member states and China, Japan and South Korea under the guidance of the ASEAN Plus Three Plan of Action on Education, 2018-2025. Regional cooperation and collaboration among ASEAN and Plus Three countries is expected to grow with commitment to and the expansion of CAMPUS Asia or the Collective Action for Mobility Programme of University Students in Asia, which was established in 2016. The COVID-19 pandemic highlighted the need to strengthen cooperation in education and people-to-people exchanges among South Korea, Japan, China and the ASEAN. CAMPUS Asia is set to expand to include Southeast Asian countries under a new programme, CAMPUS Asia Plus in 2022 (Yojana, 2022).

Global inbound mobility in Asia reached 684 592 students in 2019 compared to 378 366 inbound students from within Asia, while global outbound mobility stood at 2 062 139 against 784 830 outbound students within Asia. Indeed, Asian students seem to prefer studying within their region (UNESCO, 2022). Malaysia is the top destination in Southeast Asia for students from China (29%), Indonesia (21%) and Bangladesh (17%). In South Asia, India is the top destination country for students from Nepal (50%), Afghanistan (18%) and Bangladesh (8%), while Japan in East Asia is the main destination for half the Chinese incoming students, followed by Vietnam (20%), and Nepal (9%) (Palit et al., 2021).

Recently, some African universities have shown increasing interest in partnerships with Asian universities. For instance, Morocco was unanimously granted associate membership of the Southeast Asian Ministers of Education Organization (SEAMEO) in 2021. It is the first Arab and African country to achieve this status, consolidating its position as a privileged interlocutor in the region for the countries of Southeast Asia. In 2020, a feasibility study of the Moroccan educational information system platform (with a donation of $15 million) was carried out in partnership with China in order to prepare Cloud classroom infrastructure, infrastructure for Cloud services and high performance computing. Morocco collaborated with Japan in the fifth session of the Moroccan-Japanese Mixed Committee in January 2020 in Rabat and the steering committee of the sixth session of the Initiative ABE programme in November 2019, also in Rabat.

While most African universities' efforts have focused on building partnerships with universities in Europe and America, their attention has recently turned to institutions in the rest of Africa. Collaborations and partnerships between African universities have come a long way. The Association of African Universities (AAU) was formed in September 1963 with the strategic objective of facilitating greater collaboration among the heads of African higher education institutions. It currently has more than 400 members from around the continent and strives to advance higher education by recruiting more. Another South-South collaboration is the Youth Employment in the Mediterranean project (YEM), funded by the EU and implemented by UNESCO (2018-2020), which builds on the achievements of the Employment Component of the Networks of Mediterranean Youth project (NET-MED Youth). In alignment with UNESCO's Strategy for Technical and Vocational Education and Training (TVET) 2016-2021 and Sustainable Development Goal (SDG) 4, the YEM aims to address youth unemployment in the region by improving skills anticipation and assessment systems and the quality and relevance of TVET, and by fostering regional cooperation among the eight beneficiary countries: Algeria, Israel, Jordan, Lebanon, Libya, Morocco, Palestine and Tunisia.

A South-South collaboration involving Central Africa is the Regional

Coordination Group on SDG4-Education 2030 in West and Central Africa (RCG4-WCA) that was founded in May 2016. Under the guidance of the Regional United Nations Development Group (RUNDG), it aims to strengthen synergy between the actors who support the implementation of the Education 2030 Agenda in the West and Central African region, taking into consideration their unique development contexts and aspirations. To this end the RCG4-WCA also strives to incorporate the tenets of the African Union (AU) frameworks in its work towards the achievement of the SDG4 targets. The RCG4-WCA covers 24 countries, including Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Equatorial Guinea, Republic of Congo and Sao Tome and Principe.

The African and Malagasy Council for Higher Education (CAMES) seeks to address the problems confronting higher education in the French-speaking countries of Africa and Madagascar. It dates back to the first years of their independence, with the convention on the status and structure of the CAMES signed by 16 Heads of State or Government on 26 April 1972 in Lomé. There are 18 members of CAMES, among which are the countries of Central Africa.

Cooperation among African countries is mainly guided by the United Nation's 2030 agenda for the SDGs and their own 2063 agenda. Striving to create intra-African solutions instead of foreign ones, many African countries have launched initiatives to support development, upscale knowledge and share technical expertise. These efforts are guided by the advisory services of agencies such as the UN Development Programme Regional Bureau for Africa (UNDP), the UN Office for South-South Cooperation (UNOSSC), and in-country units such as the South-South Center in Kenya, and academic agencies such as Partnerships for Higher Education in Africa (PHEA), the African Union's support for the continent's higher education, the African Foundation for Capacity Building (AFBC), the Economic Community of West African States (ECOWAS)'s efforts in funding graduate education in its network of 15 countries up until 2020 and the West African Economic and Monetary Union.

Other South-South collaborative capacity development projects initiated by UNESCO include teacher education programmes, such as the Enhancing of Teacher Education in Africa Program funded by the Chinese government which aims to upgrade teacher training in sub-Saharan African countries via the use of ICT, and the Building the Capacities of Teachers and Teacher Trainers Program through Curriculum Reforms, funded by the Hamdan Bin Rashid Al-Maktoum Award for Distinguished Academic Performance of the United Arab Emirates. UNESCO-initiated programmes that promote women and girls' education include the Malala Fund for Girls, supported by the Pakistani government and South Korean CJ fund, the South Korean funded CJ Strategic Partnership for Girls Education and the HNA partnership for Girls and Women's Education supported by a Chinese financial services company from 2015 to 2020. Technical and Vocational Education and Training programmes supported by UNESCO are a further area for cooperation among Global South countries. Examples include the Better Education for Africa's Rise project co-funded by UNESCO and the Republic of Korea from 2017 to 2021. The project assisted five East African countries, Ethiopia, Kenya, Madagascar, the United Republic of Tanzania, and Uganda, to improve the relevance, quality, and awareness of their TVET systems. The UNESCO-Korea Funds-in-Trust funded programmes to integrate ICT in education for the benefit of both educators and learners. The first phase was implemented in Mozambique, Rwanda, and Zimbabwe from 2016 to 2019 and the second involves Côte d'Ivoire, Ghana, and Senegal from 2020 to 2023. UNESCO's efforts go beyond educational projects to create international and regional fora, networks, and knowledge exchange as well as prizes individually or co-initiated with Global South countries, such as the UNESCO International Literacy Prizes, the UNESCO Prize for girls and women, and the UNESCO-Japan Prize for education for sustainable development to motivate governments, organisations, and individuals to lead and implement innovative South-South collaboration initiatives (UNESCO, 2021).

Novel forms of South-South collaboration have emerged since the launch of the UN's 2030 agenda in 2016. These include knowledge exchange and research on climate and development policies through the creation of networks and research groups. However, as at 2017, these remained loosely connected (Rennkamp and Boulle, 2018). The UN General Assembly's 2018 report states that scaling up the Global South's efforts to achieve the 2030 agenda's goals requires the cooperation and contributions of a wide range of stakeholders, including the private sector, civil society organisations, charities, academia, and think tanks.

Academic Collaboration between Asia and Africa

East Asian countries have their own strategy to connect with the world, bearing local needs in mind. China has established closer academic collaboration with Africa through the Belt and Road Initiative. A number of high-level joint laboratories, known as China-Africa Joint Research Centers and China-Africa Innovation Cooperation Centers have been built by China and African countries. These platforms promote exchanges and training in science and technology as well as technology transfer, innovation and entrepreneurship (Ma, 2021). China has actively shared its experience and technology in agricultural development with African countries and supported them to enhance their capacity. Since 2012, 7 456 African agro-technicians have been trained, and 23 agricultural demonstration centres have been built. China also trained 20 000 African medical professionals as part of its efforts to improve the continent's medical standards and respond to the COVID-19 pandemic.

Japan recently unveiled a package of strategies for broader international academic collaboration. The Inter-University Exchange Project (IUE) program was launched by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT) to strengthen exchanges with outstanding universities in Asia, the US, and Europe and build an international cooperation network for higher education as well as cultivate international talent. It covers a wide range of disciplines, including the 'hard' disciplines of Japanese universities such as materials science, nuclear science, and food science, and the 'soft' ones of Japanese culture and language. It has involved universities in Asia, Europe, North America, South America and the Middle East (Xiong and Chen, 2020).

Geopolitical and economic factors resulted in India traditionally enjoying a healthy relationship with African countries. Drawing on indigenous African practices is a major feature of its education assistance to Africa. For example, in Ethiopia, India has focused on developing sugar and transportation and storage technologies in the context of its well-developed plantation industry so as to ensure the development of Ethiopia's specialist industries and increase the value added of its products. In Rwanda, India provided solar photovoltaic equipment worth about $1 million to 35 educational institutions. The Indian government invested Rs. 425 million in the construction of Rural Technology Parks in South Sudan (Wei and An, 2016).

Thus, it cannot be denied that the development of the southern regions is partly due to support from the North through North-South and North-South-South cooperation. Multiple projects that support developing countries have been established by Northern funders. Study visits or exchange programmes are a common feature of such collaboration. The US Department of State funds scholarships for educational and cultural exchange for countries in the Middle East and North Africa (MENA) region as well as countries with a Muslim population. The programmes, which last from couple of weeks to four years of undergraduate study, aim to develop mutual understanding between the two cultures, and offer educational opportunities for students from disadvantaged communities to study and conduct research in American universities (Bureau of Educational and Cultural Affairs Exchange Programs, 2022.). The Eiffel Excellence Scholarship Program initiated by the French Ministry of Foreign Affairs and Europe enables French higher education institutions to host outstanding foreign students from developing countries to enrol in Master's and doctoral programmes (Campus France, 2022).

It is estimated that 5% of Africa's higher education students have crossed a border for education purposes, including 404 000 sub-Saharan African students attending university in foreign countries. This number is expected to reach 22 million by 2027 (Kigotho, 2020). Nigeria had the highest outbound mobility in West Africa in 2017, with 85 000 students studying abroad. Other West African countries with significant outbound mobility include Cameron, Ghana and Angola. In North Africa, Morocco has the highest outbound mobility with 56 730 students studying abroad in 2019, followed by Egypt, with 43 718, Algeria with 31 288, Tunisia with 24 248 students, and Libya with 9 385 (UNESCO, 2022).

The significant growth of North-South and North-South-South academic cooperation or partnerships has raised the question of 'what's in it for the North?' Furthermore, the literature raises the issue of the terms of partnerships and cooperation in the field of education.

Emerging trends and Challenges to Academic Collaboration in the Post-COVID-19 Era

The COVID-19 pandemic came at "a time of fragile global relations" (Mok and Montgomery, 2021, p.375). Geopolitical tensions have undermined South-North research collaboration, leading to changes in the structure

of international scientific teams, with a narrowing of team membership and the exclusion of developing countries. Recent geopolitical events, such as the UK turning its back on the EU and the US retreating from multilateral trade and cooperation, seem to indicate a tendency towards de-globalisation, accompanied by the reinvigoration of nationalism and populism in certain countries. In this context, the sudden outbreak of the pandemic lit the fuse of nationalism (de Wit and Altbach, 2021). These tensions have led to increasing concerns about scientific nationalism, i.e., that "political rhetoric and protectionist policies would correspond with a decline in international collaboration" (Lee and Haupt, 2021, p. 322).

The COVID-19 pandemic also dealt a heavy blow to economic and social development. The drastic drop in the number of international students caused by the pandemic led to a significant loss of revenue largely generated from tuition fees (Mok et al., 2020) while higher education also bore the burden of COVID-19 management and prevention, as well as online teaching, etc. (de Wit and Altbach, 2021). Financial, mobility and other challenges have made it difficult for researchers from the Global South to build new networks for academic collaboration. Finally, the pandemic consolidated the global stratification of scientific capacity and deepened the inequalities between the Global North and South.

However, the COVID-19 pandemic and global geopolitical changes are also shaping new forms of international exchange and cooperation in higher education, leading to the emergence of new trends. Transnational education has been widely promoted as an alternative to international student mobility by Asian countries as it allows students to receive foreign education in their home country. It is likely to persist as an important tool for international educational mobility in the post-COVID era. Asia has become the leading region in terms of Transnational Education Zones, being home to seven out of eight of these zones worldwide (Suzhou Dushu Lake Science and Education Innovation District (China); Incheon Global Campus (South Korea); EduCity Iskandar Malaysia (Malaysia); Dubai International Academic City, Dubai Knowledge Park, and Ras Al Khaimah Economic Zone (United Arab Emirates); and Education City, Greater Doha Region (Qatar)) (Kleibert et al., 2021).

A new trend of regionalisation in student mobility and scientific research is also taking shape in Asia, with observers noting that the flow of international students from East-to-West is changing to an East Asia-oriented mode (Marginson, 2020a). This could be further enhanced by traditional destination countries' (e.g., the US, the UK, and Australia) visa restrictions and travel bans, and students' concerns over safety and security while studying in these countries. East Asian countries have demonstrated strong potential to become major destinations for international students (UNESCO, 2021) with their relatively sound pandemic control, easing parents' concerns over their children' safety, especially for students from Asia and Africa. As for scientific collaboration, the pandemic has also provided "a precious opportunity to enhance regional collaborations" (Mok et al., 2021, p. 8).

Some Asian countries have closed their borders and prohibited student and staff mobility. For instance, China has not allowed any students to enter the country, including those who had to return home in the spring of 2020, causing much dissatisfaction. The China International Student Union (CISU) was established during the COVID-19 crisis to highlight the challenges and frustration faced by international students, including the fact that they had to pay the same fees for online courses, which were, according to them, "of very poor quality" (Campus France, 2021).

The COVID-19 pandemic revealed the vulnerability of African higher education systems and infrastructure. The most difficult task was to keep students learning while institutions were closed. Most African higher education institutions were not prepared for the crisis and the majority of the learning models implemented were emergency solutions. For example, only 40% of Makerere University in Uganda's courses were online on the Makerere University e-Learning Environment when the pandemic broke out (Makerere University, 2020). However, online learning is now an accepted mode of delivery in most African universities, as it is worldwide. Moreover, while several African universities had previously contemplated investing in educational technology, the pandemic accelerated its adoption.

What will happen to the partnerships developed once humanity has survived the many waves of the pandemic? (Igwe, Achike and Nwanguma, 2021). While it may be too soon to provide a definitive answer to this question, circumstantial evidence can be used to predict the likely future of higher education collaborations. Igwe et al. (2021, p. 57) suggest that scientists are determined to strengthen current collaborations and establish new ones in remote areas. If this is the case, collaborations will continue for the time being, with little room for modification.

However, the pandemic has highlighted how fragile humans are and how unprepared they are to deal with global issues. It has taught Africa that national systems, including higher education institutions, must re-evaluate how they provide services. Crafting novel solutions, as well as making education accessible and affordable to all, remain critical. Existing partnerships must be deepened, and new ones must be forged in order to achieve this. More collaborative arrangements and inventive solutions to educational difficulties are required.

The major current trend in academic collaboration in higher education in Africa is assuredly to overcome the aftermath of the changes brought about by COVID-19 that students have experienced over the past three years. These new circumstances have deeply affected students' life plans and priorities as well as their interest in online classes. For example, 9.8 million African students experienced disruptions in their studies due to the closure of their institutions. Overall, one in four students could no longer attend the higher learning institutions where they were enrolled in March 2020 (Campus France, 2021).

The pandemic did not, however, put an end to African students' mobility. Whether outside or inside the continent, the number of young people who move to other countries for training has continued to grow, reaching nearly 550 000 in 2022 out of global mobility of 5.6 million (Berthaud-Clair, 2022). Today, one in ten 'outgoing' students is African and the continental mobility rate is twice as high as the world average. France, which is by far the number one destination for young Africans since it welcomes a third of them, saw an average increase of 16.5% in 'incoming' students in 2021.

The pandemic has also made North Africa an ideal destination. Mamadou Keïta, president of the Development Unit (CPD), an aid association for Malian students based in France, explained that COVID-19 has forced young people to postpone their move to other countries, including their own continent. He states that. "In order not to have a break in studies because of ... COVID, many have turned to Morocco, Algeria or Tunisia". Indeed, a third of African student mobility takes place within the continent. According to UNESCO, Africa-Africa exchanges involve at least 180 000 young people each year, with the real figure likely to exceed this given that data for demographic heavyweights such as Egypt is not available.

The two African countries that stood out during the pandemic are South Africa and Morocco. Morocco's attractiveness trebled in less than ten years. It is followed by Senegal, Ghana, Cameroon, Algeria, Uganda, Kenya, Ivory Coast, Benin, Tunisia, Niger, Burkina Faso, Madagascar and Rwanda. Nigeria's Fati N' Zi-Hassane, Head of the Human Capital Development Division of AUDA-Nepad, the development agency of the African Union (AU) states that "The confinements caused schooling disruptions, but it was above all the ensuing economic crisis that weakened mobile students on the continent, because they depend on scholarships ... the return to university benches is done, but it is difficult to say how many are left behind".

The health crisis also caused significant disorganisation. Many scholarship students were stuck in their host country, sent home or even forced to abandon their course for lack of means. Congolese Yamungu Along Boniface, vice-president of the interim office of the African Student and Alumni Forum (ASAF) in charge of mobility affirms, "We have seen all sorts of unique situations. Students have struggled to put these long months to good use, especially thanks to the internet, but 2020 is a lost year and scholarships could not always be extended into 2021".

The African continent is organising to facilitate exchanges and academic partnerships are flourishing in all directions: dubbed Afridi, Mounaf, Capitum or even Ramsess, these platforms link schools from Dakar to Antananarivo and Fez to Pietersburg, with support from private and European funds. The EU, which has just celebrated ten years of its Intra-Africa mobility programme, has developed a network which now involves 79 establishments in 25 African countries. Binational partnerships with regional influence such as the Franco-Senegalese Campus, the France Côte d'Ivoire Campus, the French University of Egypt and the opening, in 2019, of the Franco-Tunisian University for Africa and the Mediterranean (UFTAM) have boosted these efforts (World Bank, 2020).

A further emerging trend in academic collaboration in Africa is sub-Saharan African students' mobility to North Africa, drawn by educational opportunities, good quality programmes, the wide variety of offerings and the relatively low cost of living and tuition fees. Sub-Saharan African students that struggle to gain admission to European and North American universities are now looking to North Africa.

Morocco has become a major destination for sub-Saharan African students, hosting more than 18 000 including 6 500 recipients of

scholarships from the Moroccan Agency for International Cooperation. Established in 1986, the agency administers the reception of foreign students, provides administrative support and ensures students' distribution across the country. Morocco is attractive to students due to its geographical proximity to the countries of West Africa, the quality and variety of its educational offerings, including programmes directly relevant to Africa's development needs, and the aforementioned scholarships. Attracting foreign students is part of Morocco's emphasis on South-South cooperation and is considered to be of strategic importance for the kingdom (Tasnim and Aggad, 2018). The main countries of origin of incoming students in 2018 were Mali (2 744 students), Ivory Coast (1 701), Guinea (1 608), Gabon (1 366) Senegal (1 275), Mauritania (1 230), and Congo (1 218 students).

Morocco has unveiled a 15-year development model that aims to establish the country as a regional hub for higher education, research and innovation in order to attract students from the African continent and beyond (Sawahel, 2021). Elizabeth Buckner, assistant professor at the Ontario Institute for Studies in Education at the University of Toronto in Canada describes this model as a significant initiative and an important step in Morocco prioritising the SDGs. She notes that, "Morocco has a long history of being a crossroad for different parts of Europe, Africa and the Arab World, and has a lot to offer as a hub for science and learning" (Sawahel, 2021).

Tunisia is also developing a new vision for cooperation in higher education. The country was ranked second in scientific output on the African continent in 2016 and is looking to capitalise on its research infrastructure to attract foreign researchers to its more than 600 research units and laboratory facilities (Tasnim and Aggad, 2018). Tunisia currently hosts more than 5 000 sub-Saharan African students. Around 1 500 are enrolled in public universities through scholarships offered by the Tunisian government, while the majority are enrolled in private institutions.

Strategies for Future Academic Collaboration in and between the South-South, North-South, and North-South-South

The COVID-19 pandemic taught the world an important lesson and highlighted that only cooperation can ensure the common existence and development of humankind. Academic collaboration has become a valuable tool for universities around the world to enhance the quality of their education and research. Both the Global North and the Global South have recognised the unique and considerable opportunity academic collaboration represents for tertiary education.

The pandemic also highlighted the need for institutions to rethink their internationalisation and collaboration models by increasing internationalisation at home. This could be a key strategy to boost South institutions' capacity to implement internationalisation and in facing the colossal impacts of the pandemic. Well-formulated policies are required for internationalisation at home to be extended and widespread among African and Asian higher education institutions.

Firstly, strong institutional leadership, rigorous curriculum design and professional development opportunities for students and staff are required. African higher education ministries need to enhance Internet access to universities, build virtual partnerships with international universities for joint classes, create student forums to engage in exchange and research and foster language training programmes offered by universities through affordable online courses (World Bank, 2020).

Another essential strategy is the implementation of a regional approach and regional networks that bring together students and professors from other countries in the region or neighbouring regions, as well as partnerships and exchange programmes at the regional level. 'Regionalisation' offers several benefits; however, regional integration in higher education and research requires that countries share a common vision and commitment to higher education as a source of their economic and social development. It not only requires that barriers to the mobility of students and staff be removed, but also investment in capacity building for higher education and research through establishing national research funding agencies, large-scale infrastructure, and joint research centres and laboratories as well as multiple mobility programmes.

Digitalisation of higher education and research is equally important. There is also a need to develop a more equal and effective approach to North-South collaborations. As African universities engage in more international academic collaborations, they become enmeshed in debates and agendas determined by and for Northern higher education systems that respond to different social, economic and political demands and ideas (Downes, 2013). Some North-South collaborations may not match

priorities in the Global South and are sometimes counter-productive. Therefore, governments need to take the initiative to develop genuine and equal North-South partnerships. African countries need to set national strategies and initiatives in order to attract more international students. However, it is recommended that these strategies be implemented at the inter-ministerial level (World Bank, 2020).

Within the context of the COVID-19 pandemic, this strategy may have several advantages for both the North and the South. Therefore, in the post-pandemic era, North and South countries should strengthen collaborations that jointly respond to global issues and disasters, abandon extreme nationalism and confrontation, and pursue a more inclusive and sustainable future.

In tackling nationalism, international organisations such as UNESCO can promote debate and reflection on shared challenges and human destiny (UNESCO, 2021). South-South networks would enable universities to identify collaboration projects that prioritise the needs of the Global South. Current funding schemes initiated by the Global North should invite partners in Global South countries to co-design the objectives and outcomes of collaborations rather than simply receiving aid from the North.

There is no doubt that information technology and the Internet will play a greater role in international academic collaboration in the post-pandemic era. More specifically, it will pool quality teaching and learning resources and make them accessible to students who would otherwise have found it difficult to access them. It will also expand virtual mobility and exchange of knowledge among academics and students from a wide range of backgrounds, and promote university governance that actively engages with society. However, this requires that collaboration between countries and continents goes beyond education to build technological infrastructure to enable knowledge exchanges and mobility and reach more people. Collaborating with the business community, such as ICT firms, could also promote the development of long-term solutions to Africa's Internet and ICT difficulties (Tumwesigye, 2020).

Conclusion

This article discussed the current status, challenges and emerging trends and strategies in academic collaboration in Africa and Asia. It revealed that while most Global South universities' efforts have focused on building

partnerships with universities in Europe and America, their attention has increasingly turned to institutions in Asia and Africa. Collaborations between Asian universities have increased and African universities have also realised the need to collaborate with universities in the Global South. Partnerships between universities within the same country are also critical to address micro-level issues such as private universities' low or non-existent academic research output due to a shortage of professors and researchers (Nawange et al., 2021).

North-South, South-South, or North-South-South collaborations enable resources, experience and skills to be pooled and incorporate dissimilar perspectives to achieve a common goal. The COVID-19 pandemic revealed how unprepared the human population is as well as loopholes in the different modes of partnerships. The literature notes that the power relations associated with North-South partnerships limit their benefits (Downes, 2013) and that many partners in the North still interpret North-South cooperation as development aid (Africa Unit, 2013). Therefore, partners from the North - the 'source' of resources essential for the partnership - are perceived as more powerful and tend to dominate the southern partner. This results in a unidirectional partnership with more benefits to the North than the South. Furthermore, North-South partnerships are prone to challenges resulting from different goals, rationales and priorities (Greer, 2019; Saxena, 2006). Consequently, northern partners often set conditions for partnerships that are incompatible with the context of the South. This results in conflicts that must be resolved for the partnership to progress.

References

ADB. (2008). *Emerging Asian regionalism: A partnership for shared prosperity*. Manila: Asian Development Bank.

Africa Unit. (2010). *Good Practices in Educational Partnerships Guide: UK-Africa Higher and Further Education Partnerships*. London: The Africa Unit.

Altbach, P.G., and Selvaratnam, V. (eds). (1989). *From dependence to Autonomy: The Development of Asian Universities*. Dordrecht, Netherlands: Kluwer.

ASEAN. Joint statement of the fifth ASEAN Plus Three education minister meeting. https://asean.org/wp-content/uploads/2021/10/

ADOPTED-Joint-Statement-of-the-5th-APT-EMM.pdf,2021-10-01.

Berthaud-Clair, S. (2022). Deux années de crise Covid n'ont pas découragé la mobilité des étudiants africains. *Le Monde Afrique*. Retrieved from https://www.lemonde.fr/afrique/article/2022/02/15/deux-annees-de-crise-Covid-n-ont-pas-decourage-la-mobilite-des-etudiants-africains_6113815_3212.html.

Borg, R.P., Borg Axisa, G., Ophiyandri, T., and Hakam, A. (2020). The development of inter-regional and intra-regional cooperation frameworks for multi-hazard early warning systems in South and South-East Asia. *International Journal of Disaster Resilience in the Built Environment 12*(3), 265-279. doi:10.1108/IJDRBE-05-2020-0036

Campus France. (2021). *Chiffres Clés de la mobilité étudiante dans le monde*. Retrieved May 24, 2022, from https://ressources.campusfrance.org/publications/chiffres_cles/fr/chiffres_cles_2021_fr.pdf.

Cheng, M. (22 Feb 2021). Shifting Trends in International Student Mobility: Embracing Diversity and Responding to Change. Trends and Insights, https://www.nafsa.org/professionalresources/research-and-trends/shifting-trends-international-student-mobility-embracing

Choi, M., Lee, H., and Zoo, H. (2021). Scientific knowledge production and research collaboration between Australia and South Korea: patterns and dynamics based on co-authorship. *Scientometrics 126*(1), 683-706. doi:10.1007/s11192-020-03765-2

Cummings, J., Bergquist, E., Boateng, L., Phoxay, C., and Stadler, D. (2021). Innovative Partnerships: Education That Bridges Cultures to Develop Globally Fluent Dietitians and Nutritionists. *Topics in Clinical Nutrition 36*(1), 67-80. doi:10.1097/TIN.0000000000000233

Council of Europe. (2002). *Code of Good Practice for the Provision of Transnational Education*. Paris: UNESCO.de Wit, H., and Altbach, P. G. (n.d.). Fighting for Funding and against Inequality post Covid-19. 2.

Downes, G. (2013). A Critical Analysis of North-South Educational Partnerships in Development Contexts. *Policy and Practice: A Development Education Review 16* (Spring), 1-12.

Erasmus+. (2019). *Erasmus+ in Morocco: Numbers, Colors and Stories*. Retrieved May 25, 2022, from https://erasmusplus.ma/erasmus-uploads/2019/12/Erasmus-Chiffres-et-couleurs.pdf

European Commission. (2020). *EU-Asia academic cooperation through Erasmus+*. Retrieved May 25, 2022, from https://ec.europa.eu/assets/eac/erasmus-plus/factsheets/regional/asia-reg-erasmusplus-2020.pdf

Greer, J. (2019). *Partnership Governance in Northern Ireland: Improving Performance*. Routledge.

Haji, F. A., Lepard, J. R., Davis, M. C., Lien, N. D., Can, D. D. T., Hung, C. V., . . . Johnston, J. M. (2021). A model for global surgical training and capacity development: The Children's of Alabama-Vietnam pediatric neurosurgery partnership. *Child's Nervous System 37*(2), 627-636. doi:10.1007/s00381-020-04802-4

Harris, S. (2020). Partnership across continents: The Author AID network. *Biochemist 42*(3), 34-37. doi:10.1042/BIO20200021

Igwe, C.A., Achike, A.I., and Nwanguma, B.C. (2021). The Future of Continental and International Collaborations at the University of Nigeria after COVID-19. *Alliance for African Partnership Perspectives 1*, 55-59. https://www.muse.jhu.edu/article/837364.

Kleibert, J.M., Bobée, A., Rottleb, T., and Schulze, M. (2021). Transnational education zones: Towards an urban political economy of 'education cities'. *Urban Studies 58*(14), 2845-2862. doi:10.1177/0042098020962418

Kigotho, W. (2020). Sub-Saharan Africa leads the world in student mobility. *University World News*, December 3rd, 2020

Lee, J. J., and Haupt, J. P. (2021). Scientific Collaboration on COVID-19 Amidst Geopolitical Tensions between the US and China. *The Journal of Higher Education 92*(2), 303-329. doi:10.1080/00221546.2020.1827924

Lulat, Y.G.M. (2003). The development of higher education in Africa: A historical survey. In Teferra, D., and Altbach, P.G. (eds*) African Higher Education: An International Reference Handbook,* pp. 15-31. Bloomington: Indiana University Press. Makerere University. (2020). Undergraduate Students' e-Learning Readiness Survey. https://news.mak.ac.ug/2020/07/makundergraduate-students-e-learningreadiness-survey-2020/

Marginson, S. (2020a). The world is changing: Higher education and the COVID-19 pandemic. Paper presented at the Global Higher Education Webinar Series, 29 September 2020, Lingnan University.

Marginson, S. (2020b). Covid-19 and the market model of higher education:

Something has to give, and it won't be the pandemic. Oxford, UK: Centre for Global Higher Education. https://www.researchcghe.org/blog/2020-07-20-Covid-19-and-the-market-model-of-higher-education-something-has-to-give-and-it-wont-be-the- pandemic/.

Ma, Wanhua. (2021). The "Belt and Road" Initiative and the Change of Higher Education Internationalization in China. *Journal of Beijing University of Aeronautics and Astronautics (Social Sciences Edition) 34*(1),135. doi:10.13766 /j.bhsk.1008-2204.2020.0433

Martinez, M., and Sá, C. (2020). Highly Cited in the South: International Collaboration and Research Recognition Among Brazil's Highly Cited Researchers. *Journal of Studies in International Education 24*(1), 39-58. doi:10.1177/1028315319888890

Ministry of Education, Culture, Sports, Science and Technology (MEXT). *Inter-University Exchange Project (Re-Inventing Japan Project)*. Retrieved Feb 19, 2022, from https://www.mext.go.jp/en/policy/education/highered/title02/detail02/sdetail02/1373893.htm.

Mok, K. H. (ed.). (2021). *Globalizing China's social and governance reforms*. Routledge.

Mok, K. H., and Montgomery, C. (2021). Remaking higher education for the post-COVID-19 era: Critical reflections on marketization, internationalization and graduate employment. *Higher Education Quarterly 75*(3), 373-380. https://doi.org/10.1111/hequ.12330

Mok, K. H., Xiong, W., Ke, G., and Cheung, J. O. W. (2021). Impact of COVID-19 pandemic on international higher education and student mobility: Student perspectives from mainland China and Hong Kong. *International Journal of Educational Research 105*, 101718. https://doi.org/10.1016/j.ijer.2020.101718

Molosi-France, K., and Makoni, S. (2020). A partnership of un-equals: Global south-north research collaborations in higher education institutions. *Modern Africa 8*(2), 9-24. doi:10.26806/MODAFR.V8I2.343

Nawangwe, B., Muwagga, A.M., Buyinza, M., and Masagazi, F.M. (2021). Reflections on University Education in Uganda and the COVID-19 Pandemic Shock: Responses and Lessons Learned. *Alliance for African Partnership Perspectives 1*, 17-25. https://www.muse.jhu.edu/article/837359. QS Top Universities. *QS World University Rankings 2021*. https://www.topuniversities.com/university-rankings/world-university-rankings/2021, 2021-03-04.

Palit, A., Murali, D., and Jha, M. (2021). *Student Mobility in The Asia-Pacific and South Asia: Trends and Impacts of COVID-19*. ISAS.NUS.EDU.SG. Retrieved May 24, 2022, from https://www.isas.nus.edu.sg/papers/student-mobility-in-the-asia-pacific-and-south-asia-trends-and-impact-of-covid-19

Saxena, B. (2006). Report of IWGM Workshop on North-South International Collaboration in Microbicide Research. Cape Town, South Africa.

Sawahel, W. (2021). A roadmap for making Morocco a Regional Hub. *University World News*. Retrieved March 15, 2022. https://www.universityworldnews.com/post.php?story=20210608120107741

Tamaldin, N., Esch, T., Tonoli, A., Reisinger, K. H., Sprenger, H., and Razuli, H. (2020). Erasmus+ united CBHE automotive international collaboration from European to south east Asia.

Tasnim, A., and Aggad, F. (2018). Starting afresh: The Maghreb's relations with Sub-Saharan Africa. Retrieved March 16, 2022, from https://ecdpm.org/wp-content/uploads/DP-225-Starting-afresh-Maghreb-relations-sub-Saharan-Africa-ECDPM-Apr-2018.pdf

Tumwesigye, J. (2020). *COVID-19 Educational Disruption and Response: Rethinking e-Learning in Uganda*. Konrad Adenauer Stiftung.

UNESCO. (2022). *Global flow of tertiary-level students*. UNESCO UIS. Retrieved May 25, 2022, from http://uis.unesco.org/en/uis-student-flow

Waruru, M. (2019). Kenya announces bold plans to reach 30,000 international students. *The PIE News*, June 5, 2019.

Woetzel, J., Chen, Y., Manyika, J., Roth, E., Seong, J., and Lee, J. (2015). *The China Effect on Global Innovation*. McKinsey Global Institute, October, 1-136. doi:10.1016/j.techfore.2011.12.011

World Bank. (2020). *Internationalization of tertiary education in the Middle East and North Africa*. Retrieved February 13, 2022.

Xiong, Huajun, Chen Yijing. (2020). Japan's New Measures to Accelerate the Internationalization of High Education taking inter-university Exchange Program as an Example. *Education Development and Evaluation 36*(3), 65-77+112. doi:10.3963/9.issn .1672-8742.2020.03.007

Yojana, S. (2022). New CAMPUS Asia initiative extends to ASEAN countries. https://www.universityworldnews.com/post.php?story=20220121090616128,2022-01-21.