Theorising Research, Innovation and Internationalisation in African Higher Education

Kehdinga George Fomunyam

Theorising Research, Innovation and Internationalisation in African Higher Education

Kehdinga George Fomunyam

UNIVERSITY
OF
JOHANNESBURG

UJ Press

Theorising Research, Innovation and Internationalisation in African Higher Education

First published 2024

This publication had been submitted to a rigorous double-blind peer-review process prior to publication and all recommendations by the reviewers were considered and implemented before publication.

Contents

Introduction

African Higher Education and the Praxis of Research, Innovation, and Internationalisation

Kehdinga George Fomunyam 🆔
Durban University Of Technology

The African higher education landscape has experienced a myriad of success and challenges in the past five decades. This has turned the landscape into a complex one, enmeshed in a rich dose of colonial legacies, globalisation, decolonisation, COVID-19, and internationalisation focused on North-South partnerships amongst others. While researchers globally have contributed immensely to the growth of research in African higher education, scholars within the African higher education landscape have also contributed immensely to the growth in higher education both on the African continent and globally. The fact that some African universities make it into the top 500 universities worldwide in different rankings testifies to this assertion. Tamrat (2022) argues that the Covid-19 pandemic created an avenue for innovation in African higher education through diversified means of educational delivery, approaches to research and innovation, and in other ways. Since the wave of independence spread across Africa in the fifties and sixties, the role of education on the continent has always been a debatable one. Two schools of thoughts emerged in the wake of independence which have continued to dominate conversations around research, innovations, and internationalisation in African higher education today. Writing about these schools of thought championed by Ali Mazrui and Walter Rodney, Mamdani (2016, p. 72) argues that

> "Ali Mazrui called for a university true to its classical vision, as the home of the scholar 'fascinated by ideas'; Walter Rodney saw the university as the home of the public intellectual, a committed intellectual rooted in his time and place, and deeply engaged with the wider society. From these contrasting visions would emerge two equally one-sided notions of higher education: one accenting excellence, the other relevance".

The decolonisation wave which is currently sweeping the African continent and the global higher education sphere at large is still a function of the question of relevance and how to make higher education more impactful. Within the higher education section in Africa countless research initiatives, attempts at innovation and internationalising engagements are happening, but there is generally no consensus on how these three should flow and in exactly what order. Jakovljevic (2019, pp. 54-55) speaking to this argues that multiple research findings have indicated that there is "no appropriate foundation for producing innovation/invention at higher education institutions (HEIs)... (Oanda, 2013; Pouris and Pouris, 2011; Sibanda, 2008)". There are no adequate criteria for forming innovative/inventive outcomes in organisations and academic communities (Gumusluoglu and Ilsev, 2009; Heher, 2006; Hsiu-Fen, 2007) as innovation is the implementation of a new, significantly improved product, service or process that serves as a new marketing method or a new organisational method in business practices, workplace organisation or external relations (OECD, 2005). Innovation which is often produced or championed by research can take any approach or format in higher education and exploring some of the formats or approaches it has taken, is one of the concerns of this book.

While research and innovation can be situated within a particular location or context, its consumption is never situated in like manner. Internationalisation in higher education has not only resulted in exchanges and engagements in teaching and learning amongst others but also in research and internationalisation initiatives. Teferra

(2014b) argues that the relevance of internationalisation in higher education cannot be over-emphasised especially in this era of the knowledge economy, where research has grown in leaps and bounds on the African continent. Internationalisation speaks to and contributes towards quality assurance in higher education, research and its promotion, regional/global integration, and fostering human resource capacity. This is made possible against the background of the different elements of internationalisation such as student and staff mobility, regional and international networks, research initiatives, quality regimes (accreditation and ranking bodies), publication and communication (journals and databases), curricular reform, and new forms of educational delivery. As such, research, innovation, and internationalisation in African higher education are all intertwined and work hand in glove to orchestrate new regimes within the higher education construct.

De Wit, Hunter, Howard, and Egron-Polak (2015b, p. 29) recently reconfigured the definition of internationalisation as

> "the intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society".

While this definition speaks to the intentionality of the of the process and the contribution it must make to society, some like Teferra (2020a) have disagreed with the definition. He posits that this fails to engage the phenomenon of internationalisation and its reality particularly as manifested in Africa as it situates intentionality as the key component of the definition. Internationalisation in Africa is often far from being an intentional process. He continues that "African higher education is the most internationalised system in the world — not by participation but by omission" (p. 160). Africa's participation and contribution to the global landscape

in terms of research, innovation and internationalisation are the subject of exploration in this book.

Wolhuter and Wiseman (2013, p. 3) argue that

"Africa's unique social contexts play a transformative role in the development of higher education throughout the continent. As a geographic giant endowed with substantial natural resources and a growing population, Africa is a dynamic – albeit diverse – world player… Despite rapid growth in recent years, higher education in Africa is less developed than anywhere else in the world. Major challenges include expanding participation in higher education, poor infrastructure, isolation from society and communities, internationalization, and regional cooperation, and aligning the world of education with the world of work".

It is therefore not surprising that this edited volume explores issues around the following questions amongst other things: What is happening in the African higher education research and innovation landscape? What are the factors driving the migration of scholars within and outside the African continent? What kinds of engagement are happening within the African higher education landscape and how is this shaping the course of education? For ease of reading, this book is divided into several sections, with each section contact several chapters dealing with similar issues.

1. Theorising Internationalisation

This is the first section of the book, and it is made up of six chapters. Chapter one which is titled "Students' demographics in postgraduate engineering education: the case of international students" focuses on postgraduate engineering international students. The study seeks to explore the demographics of doctoral and postdoctoral non-tenure researchers in engineering education. Since academic mobility is understood as a critical part of the internationalisation process, exploring this phenomenon becomes vital. It also moves away from the usual custom of researchers from the

global North studying phenomena from the global South to engage these phenomena while situating them in the global North. The chapter also brings to light gender and racial imbalances in enrolments in postgraduate engineering programmes. The chapter concludes by articulating approaches through which the listed challenges can be tackled.

The second chapter in this book and section is titled "The role of internationalisation in improving intra-Africa research collaboration". The chapter focuses on the importance of internationalisation of higher education and the place of research collaboration within the same framework as it contributes towards the exchange of ideas across borders and disciplines, produces new knowledge and positively impacts the quality of research and education. The chapter also ponders the dangers of North-South cooperation at the expenses of South-South cooperation or regional collaborations as the case might be. The chapter argues that collaborations should consider Africanisation and decolonisation drives so as to promote epistemicide. The chapter focuses on exploring the role of internationalisation of higher education in contributing to a meaningful expansion of intra-Africa collaboration and research for the benefit of the African continent and based on the interests, priorities and ownership of Africa and Africans.

The third chapter of this book and this section has the title "Intercontinental collaborations and their impact on African higher education". The chapter sees higher education on the African continent as a product of colonialism and uneven power relations. It affirms that it is no secret that some universities on the continent still offer degrees with outdated curricula which are inherently colonial in nature. However, collaborations and partnerships between the global North and South are helping to build more efficient systems and educational architecture for a better educational experience. This chapter focuses on different collaborations in place in African higher education and the impact they are having on education.

The fourth chapter in this book focusing on academic mobility is titled "Migration of Zimbabwean scholars in the SADC region in the 21st century". The chapter situates the push for mobility from pre-independence Zimbabwe and the state of its higher education then and now. It argues that the current state of higher education in Zimbabwe has necessitated academic mobility amongst Zimbabwean scholars and students to South Africa and Botswana. This chapter seeks to explore the push and pull factors contributing to the massive movement of Zimbabwean scholars to other countries within the Southern African Development Community region with a special focus on South Africa and Botswana. The impact of such migration on the exporting and importing countries are also articulated.

The next chapter in this section is titled "Internationalisation of postgraduate research within the context of Africa". The chapter attempts to develop insight to advance postgraduate intra-Africa research from a South African perspective, while also looking at postgraduate research data from across Africa. It also looks at post-graduate research as a strategy to advance internationalisation in general and internationalisation of research in particular. The chapter highlights key strategies for the development of an inclusive research culture towards the advancement internationalisation in postgraduate research.

Chapter six, the last in this section, is titled "Internationalisation or not we move: perspectives from an outsider". The chapter focuses on the idiosyncrasies around the meaning of internationalisation and what constitutes internationalisation in the current era. It looks at a series ongoing debates on the subject of internationalisation and argues that the process of internationalising is a complex one, with spaces cutting across disciplines and influenced by a multitude of factors. The chapter concludes that the focus of higher education in Africa should be on enhancing responsiveness at all levels and if this constitutes internationalisation, it is an advantage.

2.   Theorising topical issues in higher Education

The first chapter in this section is chapter seven and is titled "Baya funda kuthi, nathi siyafunda kubo": Transformative community engagement that contributes to the decolonisation agenda of higher education". The chapter uses the social constructivist approach, within the social action model of community psychology, to explore how thoughtful community engagement (CE) programmes may promote the decolonial agenda of Higher Education Institutions (HEIs) and promote transformative learning for students and community partners. The chapter posits that community engagement works best when approached from the asset-based community development (ABCD) approach, which recognises and draws on the skills, capabilities, and knowledge that all parties have and bring with them to a partnership. The chapter provides valuable insight into how carefully managed CE partnerships in HEIs have the potential to contribute to the transformation agenda of HEIs, while promoting equitable societies as part of the decolonial agenda.

Chapter eight is titled "A posthumanist theorisation of South African higher education in the context of Africa towards sustainable learning environments". The focus of the chapter is the theorisation of higher education research and innovation landscape in South Africa (HESA). Furthermore, a theorisation from Egypt (Egyptian Higher Education Research and Innovation Landscape) is included because of the country's proximity to Europe and the Middle East. The Kenyan landscape is theorised as part of Sub-Saharan Africa. A Posthuman theorisation assists the chapter to pulverise and de-centre the notion of the individual in higher education research and innovation landscape, and in its place to recognise the immersive role and influence of the relationalities at the level of the researcher, the higher education institution, and the entire system of the country and continent.

The next chapter in this section is titled "System science – an inclusive model" and this is chapter nine. The chapter

strives to offer an appraisal of prevailing scientific debates by leading scholars in the field. The failure of global South scholars to capitalise on system science research has subsequently identified prevailing western-centric scholarship rooted in western approaches and philosophical traditions. The chapter also confronts the dominant reality to ensure that scholars recognise the value systems in which they are firmly rooted. The modifications offered via a clinical model prevent scholars from inadvertently becoming custodians of the embedded value system. The chapter concludes that the delivery of a clinical model facilitates an innovative, all-encompassing, and inclusive knowledge method for systems sciences, advancing diversity and augmenting knowledge systems.

The last but one chapter in this section is chapter ten and it is titled "Adopting systems thinking philosophy to improve processes and practices in the Universities of Technology (UoTs)". This chapter is based on a research project that explored the applicability of systems thinking philosophy in the UoTs. Given the environment in which organisations operate, it becomes necessary for organisations to continuously improve their processes and practices to remain relevant and competitive. The chapter explores an alternative management philosophy for higher education institutions informed by a number of factors that have impacted the business of higher education.

The last chapter in this section is chapter eleven and it is titled "Re-engineering sociological constellations for higher education in South Africa". The chapter focuses on the challenges of transforming the higher education landscape in post-apartheid South Africa and posits that the merger of several South African higher education institutions in 2004 further compounded these challenges. It is anchored on the premise that there exists an epistemological backlog where access to higher education has increased drastically but epistemological access remains a challenge. The chapter argues that these amongst other things fuelled the decolonisation movement which demanded the decolonisation of knowledge, but this decolonisation process cannot be completed without

a re-engineering of the sociology of education. This chapter articulates a pathway for the re-engineering of the sociology of education by articulating four sociological constellations.

3.   Theorising Online Learning and Technology

Chapter twelve is the first in this section, and is titled "Is Turnitin for punitive or educative measures in postgraduate students' research experiences?". The chapter focuses on how Higher Education Institutions (HEIs) use digital technologies for teaching, learning and research practices. This chapter explores Turnitin as one of the digital technologies used by HEIs to detect plagiarism and similarity contents for both academics and students. Designed as a qualitative case study, this chapter explores postgraduate master's students' experiences of using Turnitin for research purposes at a HEI in South Africa. The chapter reveals mixed purposes and understandings of the use of Turnitin.

Titled "Digital inequality in African higher education institutions", chapter thirteen focuses on digital inequality in African Higher Education. Most universities across the continent are increasingly shifting courses online not only as a way of addressing the ever-increasing student numbers but also to mitigate the impact of the COVID-19 pandemic. The digital divide amongst the different people on the content is also explored. The chapter examines the relationship between information and communication technologies (ICT) and digital inequality in online education in African Higher Education Institutions.

The last chapter in this section and book is chapter fourteen and is titled "Demystifying the mainstream: moving from theories to stories". The chapter seeks to explore the relevance and place of theories in higher education and articulates the need for stories as an alternative. It asks and answers the following questions: Are theories truly problematic? How do we reconcile the place of theory in contemporary research and education? How can theorizing be rid of its abstractive tendencies? How can theorizing be

decolonized? What are the alternatives to the mainstream approach to theorizing?

References

De Wit, H., Hunter, F., Howard, L., & Egron-Polak, E. (2015). *Internationalisation of higher education*. Brussels European Parliament.

Jakovljevic, M. (2019). Criteria for empowering innovation in higher education. *Africa Education Review, 16*(4), 53-71. https://doi.org/10.1080/18146627.2017.1369855

Mamdani, M. (2016). Between the public intellectual and the scholar: Decolonization and some post-independence initiatives in African higher education. *Inter-Asia Cultural Studies, 17*(1), 68-83. https://doi.org/10.1080/14649373.2016.1140260

Tamrat, W. (2022). COVID-19 Threat to higher education: Africa's challenges, responses, and apprehensions *Higher Education in Ethiopia* (pp. 223-226): Brill. https://doi.org/10.1163/9789004513488_060

Teferra, D. (2014). Charting African higher education: Perspectives at a glance. *International Journal of African Higher Education, 1*(1). https://doi.org/10.6017/ijahe.v1i1.5642

Teferra, D. (2020). The irrelevance of the re-configured definition of internationalisation to the Global South. *International Journal of African Higher Education, 7*(2). https://doi.org/10.6017/ijahe.v7i2.12905

Wolhuter, C. C., & Wiseman, A. W. (2013). The Incalculable Promise of the African Continent: Higher Education Rising to the Occasion? *The Development of Higher Education in Africa: Prospects and Challenges* (Vol. 21, pp. 3-19): Emerald Group Publishing Limited. https://doi.org/10.1108/S1479-3679(2013)0000021004

Part 1

Theorising Internationalisation

Chapter 1

Students' Demographics in Postgraduate Engineering Education: The Case of International Students

Kehdinga George Fomunyam 🆔
Durban University Of Technology

Sibusiso Moyo 🆔
Stellenbosch University

Abstract

Engineering was informally viewed as skills that were passed down from engineers who were mostly European immigrants. As times changed and development occurred, these engineering skills were integrated into the curriculum to train engineers to meet the regional economic need in various countries of the world. As a result of various needs of people and of the international community, internationalization of higher education has gained interest recently. In an attempt to unravel this, there must be an understanding of their demographic characteristics, enrolment, and support. In this demographic study, postgraduate engineering international students were the study group and data from the National Science Foundation (2018) was used in this study. Data was collected from graduate students and post doctorates in science and engineering (GSS). This research is a demographic study of doctoral and postdoctoral non-tenure researchers in engineering education. Findings from the study revealed that there was more male enrolment than female in postgraduate programmes. It was also found that among all the race groups, the whites were also high in terms of enrolment in

postgraduate engineering programmes. Findings revealed that the most profound primary source of support for full-time students is nonfederal support. This study recommends that gender consideration be intensified in engineering disciplines to ensure gender equality.

1.   Introduction

In the United States, engineering was seen informally as skills that were passed down from engineers who were mostly European immigrants. As times changed and development occurred, these skills were integrated into the curriculum to train engineers to meet the regional economic need. Historically, as a result of the land-grant schools under the provision of the Morrill Act of 1862, engineering education had expanded rapidly in the United States (Marcus, 2005). Afterwards, engineering was integrated into the academia and a four-year curriculum was adopted for a degree course in engineering. In the 21st century, as a result of the massive advances in science and technology and global competition, there is a need to have a workforce that is scientifically oriented and technically proficient which necessitates international students to pursue engineering education. Also, the vitality of the innovation economy in the United States depends on the presence of a highly educated technical workforce and this can only be maintained by retaining international students. For this reason, a major component of the workforce consists of engineers, engineering technicians and engineering technologists.

As a result of various needs of people and of the international community, internationalisation of higher education has recently gained much interest. International students are individuals enrolled in higher education institutions; they are on temporary student visas and are non-native English speakers (Stevens, Emil, & Yamashita, 2009). The need to have international education might be influenced by various factors such as access to better educational facilities, need for global exposure, personal preference,

prevailing conditions etc. International students come from various backgrounds, and they have various experiences. They also bring to the fore various skills and level of the English knowledge (Bektas, 2008; Sovic, 2009). However, in the pursuit of their education, they are constrained with enrolment, support mechanisms, racial bias, language difficulties, acclimatizing to a new environment, new ways of learning and new people who they might not have met before. This is in line with the findings of Lu (2001) who revealed that major areas of concerns for international students in the United States are communication/language, financial issues, socio/cultural issues, psychological/personal, housing, food and health issues.

Some reports from the scientific community have described the effect of demographics on the future of science and engineering workforce (National Science Foundation, 2006). Also, it was revealed that science and engineering have been primarily the domain of white males (National Science Foundation, 2006). It has been observed that a large proportion of the US population is composed of minorities (Barton, 2003). In an attempt to unravel this, there is a need to understand their demographic characteristics, enrolment, and support. This study seeks to ascertain the demographic characteristics of international students and analyse their primary source of support and primary mechanism of support.

2.   Literature Review

Engineering education in the early years of the United States was patterned after the English system of apprenticeship. According to Seely (2005) an apprentice is engaged in his work with the help of an experienced surveyor, draftsman or machinist to learn the trade. The apprenticeship model could not keep up with the demand for engineers as the United States rapidly grew and expanded in the 1800s. The approach of most American universities historically has been the classical college model of instruction to teach courses like Philosophy, Greek, Latin and classic literature and to award a Bachelor

of Arts degree. Such an instruction model was not enough to provide the type of engineers needed for a progressing country.

The first engineering programme in the United States was established in 1802 by Congress. The aim of this programme was to train engineers on military and civil engineering principles. The educational programme was made formal in 1917 by Colonel Sylvanus Taylor on the model of the French Ecole Polytechniqe with much emphasis on mathematics and science (Grayson, 1977) After that, universities began to offer engineering coursework during the first half of the 1900s.

For more than 50 years, the United States has made remarkable discoveries in technology as a result of innovation which has culminated in economic prosperity for the nation and social well-being for the citizens. This agrees with the argument of Charles Vest when he maintained that for America to achieve prosperity and security, there must be the discovery of new scientific knowledge and technological potential through research, and a drive for high-end sophisticated technology at a pace faster than anyone else (Vest, 2006). Such a drive to make discoveries, to innovate continually and support sophisticated industries has expanded the engineering knowledge base in the United States.

With the world evolving from different epochs tagged as industrial revolutions, there has been profound influence on engineering education. Engineering education was basically crude and lacked the necessary drive for massive industrialization but as humans interacted more with the environment and for survival, they wished to gain more mastery which resulted in the evolution of various technologies. Engineering education as a discipline evolved as a result and contributed to national development in the country.

Recently, there has been increasing concern for the shortfalls in the number of American students pursuing engineering and other technical courses in the United States (National Academies of Sciences Engineering and

Medicine, 2017) and the diversity among those venturing into engineering discipline (Buccheri, Gurber, & Bruhwiler, 2011; National Academy of Sciences National Academy of Engineering & Institute of Medicine, 2010; National Research Council & National Academy of Engineering, 2014). This might have sparked the increased attention on internationalisation of students in engineering education.

International students across various disciplines impact universities in the United States. Academically, they are a major part of research universities and are seen to be highly vital to innovation in the United States. With international students enrolling in research universities, it is a pointer to the fact that international students are picking up the pace of innovation in the United States and they are essential to the research capabilities of the universities.

Also, as a result of the quality of domestic students, international students are attracted to United States universities. As a result of increasing numbers of international students in advanced studies, it has been proven that programmes should be made better, for which funding is needed. By virtue of their studies, international students pay full tuition fees, and they need to show proof of financial support before gaining entry into the university. Once a student is admitted, more revenue is generated for the university for a certain number of years depending on the type of programme (undergraduate or postgraduate). By injecting billions of dollars to the United States economy each year, international students are a vital source of revenue. From money spent on tuition fees, food, clothing, travel, textbooks, research etc., the United States has benefited extensively.

3. Data and Methods

Data was collected from graduate students and postdoctorates in science and engineering (GSS). The survey of graduate students and postdoctorates in science and engineering (GSS) is an annual census of all academic institutions in the United States and its territories (Guam and Puerto Rico) granting

research-based masters' degrees or doctorates in science and engineering or selected health fields, as of the autumn of the survey year.

The survey data was collected through coordinators at eligible institutions. Coordinators were assigned by their institution and were responsible for identifying all GSS eligible units, collecting the requested data, and submitting the data to the survey contractor. Coordinators were provided with access to the GSS Web survey to report aggregate counts on enrolled masters and doctoral students, postdocs, and NFRs in each eligible unit, as of the fall term of the academic year 2018. Reporting was done by the coordinator uploading a file with requested data to the GSS website, which automatically aggregated the data and populated the cells of the Web survey instrument for each eligible unit. Alternatively, coordinators could also manually enter data into the Web survey. Hard copies of the survey worksheets and GSS-eligible code lists were also mailed to the institution coordinators as reference. The Web survey was the primary mode of data submission. Based on the review of respondent data and explanatory comments provided by the respondents, follow-up telephone calls were made, or e-mails were sent to clarify responses, if needed.

3.1. Data Processing

All data submitted by institution coordinators was reviewed to ensure that data fields were complete, and that data was internally consistent. Data that substantially different from previously reported data was flagged for review by the survey contractor. If additional information or corrections were needed, institution coordinators were contacted by telephone or e-mail and asked to correct and resubmit the survey data.

3.2. Estimation Techniques

The survey method used in this study is a census of eligible units; therefore, weighting for sampling is not applicable.

Imputation rather than weighting is used to adjust for unit non-response; imputation is also used for item non-response.

3.3. Research Design

This research is a demographic study of doctoral and postdoctoral non-tenure researchers in engineering education.

3.4. Target Population

The survey target population of this study was the academic institutions in the United States and its territories (Guam and Puerto Rico) that grant research-based masters or doctoral degrees in science, engineering and health (SEH) fields. This population includes branch campuses, affiliated research centers and health facilities, and separately organized components, such as medical or dental schools, schools of nursing, and schools of public health.

3.5. Sampling Frame

The sample size in 2018 included 19,592 units at 715 academic institutions in the United States that granted research-based master's degrees or doctorates in SEH fields.

3.6. Sample Design

The GSS is a census in which eligible academic institutions are identified primarily through integrated postsecondary education data system (IPEDS)

4. Findings and Discussion

4.1. Demographic Characteristics

The results exhibited in Table 1 show graduate programmes categorized into institutions, schools and units. These findings are categorized into variables such as gender, ethnicity, visa type, and nature of studies.

· *Gender*: Table 1 reveals that out of the total number of all graduate students (163301), the number of males were 121935 (74.7%) while females were 41366 (25.3%). To categorize these further into masters and doctoral programmes, 75.3% of the masters' students were males while 24.7% of the masters' students were females. For doctoral students, 73.9% were males while 26.1% were females. The result implies that there was more male enrolment in postgraduate programmes than females. This is in line with the findings of the National Science Foundation (2006) which maintained that science and engineering have been primarily the domain of white males. The view of Blickenstaff, (2005) also supports this result, maintaining that women with advanced degree are widely underrepresented in STEM fields of which engineering is a part. This might be attributed to the assertion that engineering is often viewed as a discipline for the male gender and until recently, the bulk of the profession has always been dominated by males.

· The inequality in the ration of males to female shows that a high percentage of the entire student demography is males. There are now various concerns to make the discipline more gender friendly and ensure that females are attracted to ensure gender parity. With more males involved in postgraduate engineering disciplines, making the case for gender balance is important. Limited numbers of women in academic STEM disciplines causes great stress on scientific creativity (National Academy of Science, 2007) and results in a shortage of professionals (Kuenzi, 2008).

4.2. Ethnicity

· *US Citizens:* Out of the total number of all graduate students, 47.0% were United States citizens. Table 1 indicates more master's students than doctoral students. It is observed that 51.4% of the population are master's students while 41.2 are doctoral students. It is important to note that a PhD is one of the highest levels to be attained in

terms of academic hierarchy and people mostly start a PhD for professional advancement in academia. Being a United States citizen offers immense opportunities for further studies along doctoral and masters' lines. There are wide opportunities for studies in the country, a conducive environment and infrastructure that is critical to ensure a smooth academic journey. Hence, the high number of postgraduate students that are United States citizens is justifiable in light of this. Also, the number of enrolments for PhD might not be as high as for master's degrees for permanent residents because people might be enthused more about a PhD just to secure a job in academia or for career advancement.

- *Other ethnicity and race*: among the other races considered, the whites were also high in terms of enrolment in postgraduate engineering programmes. Table 1 shows 29.1% of all graduate students are whites. High up the hierarchy are Asians (6.7%). This agrees with the findings of UNESCO Institute for Statistics (UIS) (2014) which reveals that Central Asia has the highest number of international students with the number of its citizens schooling abroad increasing from 673,00 in 2003 to 156,600 in 2012. Other ethnicity and race include Hispanic or Latino (4.9%), black or African American (2.5%), unknown ethnicity and race (2.3%), more than one race (1.5%), American Indians or Alaska Natives (0.1%). This result is in line with the findings of Verbik and Lasanowski (2007) who maintained that the United States is the leading destination for international students. This result is also in line with the findings of Barton (2003) who maintained that since the beginning of the 21st century, a larger proportion of the United States population will be composed of minorities such as blacks, Hispanics, Native Americans etc. Hawawini (2011) also supports this result when he revealed that the impetus for internationalisation in United States continues to gain momentum and the population of international students in the United States has increased steadily from 1940 until present.

- Since the mid-20th century, international student mobility has experienced an increase. The mobility of international students is a strong index of globalization or internationalisation of higher education (Kehm, 2005). International students' presence has been on the increase in the United States and as a result of their presence, they are an important component of diversity. As a result of the increase in the population of international students in the United States, it makes a significant contribution to the personality of the institution and its financial status. With the majority of international students paying full tuition fees, their importance cannot be understated. International students of various races and ethnicity are also vital to research in universities. They are seen to be important to innovation in the United States. This is in line with the findings of Chellaraj, Maskus, and Aaditya (2008) who argued that a 10% increase in international graduate students will culminate in 4.5% increase in patent application. International students in engineering and technology do not outperform domestic students in dissertation awards and patent application; they only complement them Matloff (2013). Also, the findings of the Institute of International Education (2015) revealed that from the vast majority of respondents worldwide, 74% of the respondents chose the United States as their destination of choice for higher studies. This agrees with the result from this study. This also confirms the findings of the OECD (2018) which revealed that the United States is the top destination of choice for international students, whose numbers grew by 7.1% since 2015. This agrees with the findings of Chow (2015) who maintained that the United States remains the major destination for international students.

International students have an increasing presence in many universities in the United States and with their presence they are an important component of diversity of thought. As a result of diversity, they are important for reshaping academic discipline and the entire university community. A walk across

any university campus in the United States speaks volume about the presence of international students and it has become a source of pride for universities to have great diversity.

- *Visa type*: It is important to bear in mind that if you want to take a postgraduate course in the United States and you are not a citizen, you will need to have a student visa in place before your arrival. Table 1 reveals that 53.0% of all graduate population were temporary visa holders. This implies that international students were more numerous in terms of enrolment compared to United States citizens. We also see that 58.8% of the doctoral students, and 48.6% of the master's students, had temporary visas. One of the challenges that international students face in the United States is a cumbersome and exhausting visa process and this implies that only those with determination succeed in gaining entry into the United States universities.
- *Nature of studies*: The postgraduate programmes in the United States afford some degree of flexibility for students and people can decide to work at their own pace. This might be necessary due to various concerns such as job demands, family duties and other considerations. Hence, there are options for full-time and part-time programmes. From the results in Table 1, we see that 73.8% of all graduate population are full-time while 26.2% are part-time students. This might be as a result of the reasons previously mentioned. Similarly, 87.3% of the doctoral students are full-time students while 12.7 are part-time students. 63.6% of the master's students are full-time students while 36.4% are part-time students.
- *First time in United States*: Table 1 also shows that 38,565 students are first time students in the United States. From the results, 27,784 students out of the masters' cadre are first time students in the United States while 10,801 in the doctoral cadre are first time students in the United States.

Table 1:   Demographic characteristics.

Type		All graduate students		Masters students		Doctoral students	
		Number	Percent	Number	Percent	Number	Percent
	Institutions	328	45.9	320	44.8	227	31.7
	Schools	340	41.6	328	40.1	235	28.8
	Units	2,246	11.5	2,016	10.3	1,338	6.8
	All graduate students	163,301	100.0	93,064	100.0	70,237	100.0
Sex	Male	121,935	74.7	70,039	75.3	51,896	73.9
	Female	41,366	25.3	23,025	24.7	18,341	26.1
Ethnicity and Race	U.S. citizens and permanent residentsa	76,770	47.0	47,813	51.4	28,957	41.2
	Hispanic or Latino	7,939	4.9	5,436	5.8	2,503	3.6
	Not Hispanic or Latino						
	American Indian or Alaska Native	211	0.1	140	0.2	71	0.1
	Asian	10,863	6.7	6,758	7.3	4,105	5.8
	Black or African American	4,035	2.5	2,618	2.8	1,417	2.0

Type		All graduate students		Masters students		Doctoral students	
		Number	Percent	Number	Percent	Number	Percent
	Native Hawaiian or Other Pacific Islander	75	*	45	*	30	*
	White	47,447	29.1	28,993	31.2	18,454	26.3
	More than one race	2,460	1.5	1,519	1.6	941	1.3
	Unknown ethnicity and race	3,740	2.3	2,304	2.5	1,436	2.0
Visa type	Temporary visa holders	86,531	53.0	45,251	48.6	41,280	58.8
Nature of study	Part time	42,780	26.2	33,836	36.4	8,944	12.7
	Full time	120,521	73.8	59,228	63.6	61,293	87.3
First time		38,565	23.6	27,764	29.8	10,801	15.4

Source: *National Science Foundation (2018).*

Table 2: Primary source of support for full-time students

Institution	All graduate students		Master's students		Doctoral students	
	Number	Percent	Number	Percent	Number	Percent
Federal	21,961	13.4	3,591	3.9	18,370	26.2
DOD	4,346	2.7	1,255	1.3	3,091	4.4
DOE	2,191	1.3	302	0.3	1,889	2.7
HHS	3,271	2.0	240	0.3	3,031	4.3
NIH	2,615	1.6	135	0.1	2,480	3.5
Other HHS	656	0.4	105	0.1	551	0.8
NASA	703	0.4	157	0.2	546	0.8
NSF	8,159	5.0	832	0.9	7,327	10.4
USDA	325	0.2	90	0.1	235	0.3
Other	2,966	1.8	715	0.8	2,251	3.2
Nonfederal	53,424	32.7	15,758	16.9	37,666	53.6
Institutional	44,127	27.0	13,544	14.6	30,583	43.5
Domestic	7,294	4.5	1,672	1.8	5,622	8.0

Institution	All graduate students		Master's students		Doctoral students	
	Number	Percent	Number	Percent	Number	Percent
Foreign	2,003	1.2	542	0.6	1,461	2.1
Self-support	45,136	27.6	39,879	42.9	5,257	7.5

*= value < 0.05%.

DOD = Department of Defense; DOE = Department of Energy;

HHS = Department of Health and Human Services;

NASA = National Aeronautics and Space Administration;

NIH = National Institutes of Health;

NSF = National Science Foundation;

USDA = Department of Agriculture.

a Ethnicity and race data are available only for U.S. citizens and permanent residents.

b Funding data are available only for full-time students.

NOTE: Percentages may not add to total because of rounding.

SOURCE: National Center for Science and Engineering Statistics,

Survey of Graduate Students and

Post doctorates in Science and Engineering, 2018.

4.3.   Primary Source of Support for Full Time Students

The cost of higher education in the United States increases on a yearly basis and many students find it challenging to support themselves across their programme. With postgraduate studies in the United States, there are a series of support programmes for students. From the data in this study, some of the primary sources of support for full-time students include federal support, support from the departments of defense and energy, National Aeronautics and Space Administration; National Institutes of Health; National Science Foundation; and United States Department of Agriculture. Table 2 indicates that the most profound primary source of support for full-time students is nonfederal support (53,424). Apart from this primary source of support, self-support is next in line. Most of the postgraduate students supported themselves using their own means (27.6%). This might be attributable to the fact that the US economy provides them with the opportunity to support themselves using their own means. Other prominent means of primary support for full-time students are institutional support (27.0%) and federal support (13.4%). Other sources of support are the DOD (2.7%), DOE (1.3%), HHS (2.0%), NIH (1.6%), Other HHS (0.4%), NASA (0.4%), NSF (5.0%), USDA (0.2%), Domestic (4.5%), foreign (1.2%), others (1.8%).

4.4.   Primary Mechanism of Support for Full-Time Students

Table 3 contains data on the primary mechanism of support for full-time students. Most higher education institutions in the United States have various primary mechanisms of support for students which include fellowships, research assistantships, teaching assistantships, and traineeships. Other types of support include self-support and other types. From the results, it is seen that the most prominent source of support is other types of support (33.8%). Under this support mechanism, self-support (27.6%) is the major primary mechanism of support for full-time students. It is important to note that postgraduate studies require support for successful study. Postgraduate studies are often done by those who have the wherewithal to support themselves

throughout the educational process. With reference to the data in Table 3, more master's students (42.9%) engage in self-support compared to doctoral students (7.5%). This might be because a master's degree might be less capital-intensive than a doctoral degree. Other primary mechanisms of support for full-time students include research assistantships (23.5%).

Doctoral students have more support (45.6%) in terms of research assistantship than master's students (6.9%). This puts them primarily in the line of research. With the two-pronged need to support research in higher education and the need to support students throughout their programme, research assistantship is important. Also, there are teaching assistantships (9.3%) to encourage students to develop their teaching skills and also earn money to support themselves throughout their educational journey. More doctoral students (14.8%) are involved in teaching assistantships than master's student (5.2%).

Fellowship is also a primary mechanism of support for full-time students (6.1%) and traineeships (1.0%). Fellowships provide a basis to start a career or significantly improve one's career and make impressive contributions to one's academic profile. While on fellowship, the individual works with professionals along engineering lines, receives mentorship, enhanced training opportunities, networks and makes connections in the field which can lead to further opportunities and better career choices. There are different types of fellowships depending on various factors such as discipline. Doctoral students have more primary mechanisms of support for full-time students in terms of fellowship (11.7%) compared to master's students (1.9%).

5.   Conclusion and Recommendation

The findings of this study should be carefully interpreted because it was a demographic study focusing only on international postgraduate engineering students in the United States. Thus, generalizing beyond this group of international students is limited. Future studies should consider an analysis

Table 3: Primary mechanism of support for full‑time students.

Support Mechanism	All graduate students		Master's students		Doctoral students	
	number	Percent	Number	percent	number	Percent
Fellowships	9,971	6.1	1,752	1.9	8,219	11.7
Research assistantships	38,457	23.5	6,404	6.9	32,053	45.6
Teaching assistantships	15,259	9.3	4,858	5.2	10,401	14.8
Traineeships	1,557	1.0	536	0.6	1,021	1.5
Other types of support	55,277	33.8	45,678	49.1	9,599	13.7
Self‑support	45,136	27.6	39,879	42.9	5,257	7.5
Other	10,141	6.2	5,799	6.2	4,342	6.2

Source: National Science Foundation (2018).

of other groups. The study considered the demographics of postgraduate engineering students using international students as a case study. It is important to note that there is an intensified effort on internationalisation of students in the United States because of the various advantages it confers on the country. Numerous among such is diversity. With diversity amongst various students in the universities in United States, it has strengthened academic processes and research. It has also resulted in the increase of revenue for the government which has consequential benefits for the country as a whole, the citizens and their social well-being. The United States has been a top choice of destination for international studies and this might be attributed to the quality offered in terms of education and the presence of necessary infrastructure critical to the overall success of students. This study found that there is a wide gender gap between males and females. This must be critically addressed and concerted action should be taken to encourage gender equality in engineering disciplines. There is a minority presence in the demography although this a low. This study therefore recommends that gender consideration be intensified in engineering disciplines to ensure gender equality. Also, there should be increased attention given to enrolment of international students in the United States.

References

Barton, P. E. (2003). *Hispanics in science and engineering: A matter of assistance and persistence, Educational Testing Service.* Retrieved from Policy Information Report:

Bektas, D. (2008). Counseling international students in Turkish universities: Current status and recommendations. *International Journal for the Advancement of Counseling, 30*(4), 268-278. https://doi.org/10.1007/s10447-008-9064-y

Blickenstaff, C. J. (2005). Women and science careers: Leaky pipeline or gender filter? *Gender and education, 17*(4), 369-386. https://doi.org/10.1080/09540250500145072

Buccheri, G., Gurber, N. A., & Bruhwiler, C. (2011). The impact of gender on interest in science topics and the choice of scientific and technical vocations. *International Journal of Science Education, 33*(1), 159–178. https://doi.org/10.1080/09500693.2010.518643

Chellaraj, G., Maskus, K., & Aaditya, M. (2008). The contribution of international students to U.S. innovation. *Review of International Economics, 16*(3), 444-462. https://doi.org/10.1111/j.1467-9396.2007.00714.x

Chow, P. (2015). What international students think about US higher education? *International Higher Education, 65*, 10-12. https://doi.org/10.6017/ihe.2011.65.8568

De Wit, H., Hunter, F., Howard, L., & Egron-Polak, E. (2015). *Internationalisation of higher education*. Brussels European Parliament.

Grayson, L. P. (1977). A brief history of engineering education in the United States. *Engineering Education, 68*(3), 246-264.

Hawawini, G. (2011). The internationalisation of higher education institutions: A critical review and a radical proposal. https://doi.org/10.2139/ssrn.1954697

Institute of International Education. (2015). What international students think about U.S. higher education: Attitudes and perceptions of prospective students from around the world. Retrieved from: http://www.iie.org/~/media/Files/Corporate/Publications/What-International-Students-Think-About-US-Higher-Education-2015.ashx.

Jakovljevic, M. (2019). Criteria for empowering innovation in higher education. *Africa Education Review, 16*(4), 53-71. https://doi.org/10.1080/18146627.2017.1369855

Kehm, B. M. (2005). The contribution of international student mobility to human development and global understanding. *Online Submission, 2*(1), 18-24.

Kuenzi, J. J. (2008). *Science, technology and engineering, and mathematics (stem) education: Background, federal policy, and legislative action*. Retrieved from Congressional Research Service reports Paper 35. Washington: Congressional Research Service:

Lu, M. (2001). *International students and University support services: Utilization and Perceived effectiveness*: State University of New York at Buffalo.

Mamdani, M. (2016). Between the public intellectual and the scholar: Decolonization and some post-independence initiatives in African higher education. *Inter-Asia Cultural Studies, 17*(1), 68-83. https://doi.org/10.1080/14649373.20 16.1140260

Marcus, A. I. (2005). Engineering in a land-grant context: The past, present, and future of an idea. In (pp. 1-4). West Lafayette, IN, USA: Purdue University Press.

Matloff, N. (2013). Are foreign students the best and brightest? Economic Policy Institute. Retrieved from: http://www. epi.org/publication/bp356-foreign-students-best-brightestimmigration-policy/.

National Academies of Sciences Engineering and Medicine. (2017). *Building America's skilled technical workforce.* Washington, DC: The National Academies Press.

National Academy of Science. (2007). *Beyond bias and barriers. Fulfilling the potential of women in academic science and engineering. Edited by National Academy of Science Committee on Maximizing the potential of women in academic science and engineering, National Academy of engineering and institute of medicine.* Washington: National Academy Press.

National Academy of Sciences National Academy of Engineering & Institute of Medicine. (2010). *Expanding underrepresented minority participation: America's science andtechnology talent at the crossroads.* Washington, DC: The National Academies Press.

National Research Council & National Academy of Engineering. (2014). *Career choices of female engineers: A summary of a workshop.* Washington, DC: The National Academies Press.

National Science Foundation. (2006). *Women, minorities, and persons with disabilities in science and engineering December 2006 Update.* Arlington, VA.

National Science Foundation. (2018). Science & engineering indicators 2018(NSB-2018-1) / Digest (NSB-2018-2)/ January 2018. Retrieved from: https://www.nsf.gov.

OECD. (2018). *Education at a glance 2018 - data and methodology: IndicatorB6.1: What is the profile of internationally mobile students?* Paris: OECD Publishing. https://doi.org/10.1787/eag-2018-en

Seely, B. E. (2005). Patterns in the history of engineering education reform: A brief essay. Educating the Engineer of 2020: NationalEducation Summit. In (pp. 114-130): National Academies Press.

Sovic, S. (2009). Hi-bye friends and the herd instinct: international and home students in the creative arts. *Higher Education, 58*(6), 747-761. https://doi.org/10.1007/s10734-009-9223-z

Stevens, D. D., Emil, D., & Yamashita, M. (2009). Mentoring through reflective journal writing: A qualitative study by a mentor/professor and two international students. *Reflective Practice, 11*(3), 347-367. https://doi.org/10.1080/14623943.2010.490069

Tamrat, W. (2022). COVID-19 Threat to higher education: Africa's challenges, responses, and apprehensions. In *Higher Education in Ethiopia* (pp. 223-226): Brill. https://doi.org/10.1163/9789004513488_060

Teferra, D. (2014). Charting African higher education: Perspectives at a glance. *International Journal of African Higher Education, 1*(1). https://doi.org/10.6017/ijahe.v1i1.5642

Teferra, D. (2020). The irrelevance of the re-configured definition of internationalisation to the Global South. *International Journal of African Higher Education*, 7(2). https://doi.org/10.6017/ijahe.v7i2.12905

UNESCO Institute for Statistics (UIS). (2014). Global flow of tertiary-level students. Retrieved from: http://www.uis.unesco.org/Education/Pages/international-student-flow-viz.aspx.

Verbik, L., & Lasanowski, V. (2007). The observatory on borderless higher education- international student mobility: Patterns and trends. Retrieved from: https://www.obhe.ac.uk.

Vest, C. M. (2006). Educating engineers for 2020 and beyond", The Bridge. In (pp. 38–44). Washington, DC: National Academy of Engineering.

Wolhuter, C. C., & Wiseman, A. W. (2013). The Incalculable Promise of the African Continent: Higher Education Rising to the Occasion? In *The Development of Higher Education in Africa: Prospects and Challenges* (Vol. 21, pp. 3-19): Emerald Group Publishing Limited. https://doi.org/10.1108/S1479-3679(2013)0000021004

Chapter 2

The Role of Internationalisation in Improving Intra-African Research Collaboration

Savo Heleta
Durban University of Technology

Divinia Jithoo
Durban University of Technology

Lavern Samuels
Durban University of Technology

Abstract

Strengthening research capacity on the African continent is key for progress and development of solutions that are relevant for continental challenges, needs and interests. Research collaboration in higher education enables knowledge exchange and plays a major role in innovation, creation of new knowledge, and increasing the visibility of research. International research collaboration, as one of the key aspects of internationalisation of higher education, contributes to the exchange of ideas across borders and can positively impact the quality of research and education. At the same time, internationalisation can contribute to the reinforcement of global power dynamics and inequalities in knowledge production and dissemination. Due to global inequalities and the Eurocentric hegemony in higher education and knowledge production, African institutions tend to engage and collaborate primarily with their counterparts in the global North while side-lining collaboration with institutions and researchers on

the African continent. This chapter explores the reasons for the lack of intra-African research collaboration. We focus on the impact of colonialism and post-colonial neglect on Africa's higher education, and internationalisation practices which have largely followed conceptions and definitions developed in the global North. We also discuss funding challenges and dependence on external donors, and the geopolitics and power dynamics in knowledge production. The chapter ends with a discussion about structural and systemic changes that are needed on the continent, and the role of internationalisation of higher education in addressing the challenges and contributing to a meaningful expansion of intra-African research collaboration.

1. Introduction

The African Union's Agenda 2063, the African continent's long-term vision, calls for "an integrated, prosperous and peaceful Africa, driven by its own citizens and representing a dynamic force in the international arena" (African Union, 2015, p. 1). The aspiration of the Agenda 2063 is for the African continent to become a "strong, united and influential partner on the global stage making its contribution to peace, human progress, peaceful co-existence and welfare" (African Union, 2015, p. 1). An important part of Agenda 2063 is the development of capacity and human capital through "sustained investments in higher education, science, technology, research and innovation" (African Union, 2015, p. 2). Agenda 2063 also calls for African universities to broaden and harness their collaborations, partnerships and networks "to enable high quality university education" (African Union, 2015, p. 15).

One of the main roles of higher education is the production of knowledge for socio-economic and sustainable development, eradication of poverty, livelihood improvements and good governance (Aina, 2010; African Union, 2014; UNESCO, 2017). Strengthening research capacity on the African continent is key for progress and development of solutions

that are relevant for the local and regional challenges, needs and interests. Research collaboration enables knowledge exchange and plays a major role in innovation, creation of new knowledge (Mouton, Prozesky & Lutomiah, 2018; Onyancha, 2021; Vieira & Cerdeira, 2022; Heleta & Jithoo, 2023) and increasing the visibility of research (Asubiaro, 2019). International research collaboration, as one of the key aspects of internationalisation, contributes to the exchange of ideas across borders and can positively impact the quality of research and education.

However, as Zeleza (2012) points out, while internationalisation provides numerous opportunities for African universities to engage, network and collaborate with institutions across the globe, it also contributes to the reinforcement of global power dynamics and inequalities in knowledge production and dissemination. The higher education and research landscape around the globe continues to be "characterised by a highly uneven distribution of resources, unequal and extractive relationships between institutions and academics in wealthier and poorer nations, and an over-representation of Western knowledge systems in both teaching and research" (Stein & Silva, 2020, p. 552). Long after the end of colonialism, and despite the declarations and rhetoric about Africanisation and epistemic decolonisation, African higher education systems and institutions remain trapped in the colonial legacy and Eurocentric epistemologies, curricula, pedagogies and research methodologies and approaches (Zeleza, 2012; Nyamnjoh, 2019). International collaboration, research and knowledge production globally, and particularly on the African continent, continue to be framed and conceptualised by the institutions and academia in the global North and characterised by inequities, inequalities, hegemonic structures and power dynamics (Nyamnjoh, 2019).

Due to global inequalities and the Eurocentric hegemony in higher education and knowledge production, African institutions tend to engage and collaborate primarily with their counterparts in the global North while side-lining collaboration with institutions and researchers on the African

continent. Reasons for this can be found in the colonial roots of higher education in Africa, coloniality, postcolonial neglect of higher education systems and institutions by African governments, disinvestment in research and higher education in Africa over the past few decades, and the international funding structures that favour the institutions from the global North. This way, African academia and scholarship continue to be shaped by the Eurocentric perspectives and paradigms, deriving their "impetus not from deep engagement with the real of the local, but from ritual obeisance to the theoretical and methodological fads" from the global North (Zeleza, 2012, p. 16). Asubiaro and Shaik (2021) suggest that the continent urgently needs to find solutions for the lack of intra-African research collaboration as one way of strengthening Africa's knowledge base and creating solutions for the continent and the world.

This chapter will explore the reasons for the lack of intra-African research collaboration. We will discuss the impact of colonialism and post-colonial neglect on Africa's higher education. Our focus will also be on internationalisation practices in Africa which have largely followed conceptions and definitions developed in the global North. We will discuss funding challenges and dependence on external donors, and the geopolitics and power dynamics in knowledge production. We will unpack bibliometric data which shows that international collaboration with institutions and academics outside the African continent dominates collaborative research and knowledge production in Africa, while collaboration with African counterparts remains miniscule. The chapter will also focus on the structural and systemic changes that are needed and the role of internationalisation of higher education in addressing this challenge and contributing to a meaningful expansion of intra-African research collaboration.

2. The Impact of Colonialism on African Higher Education and Post-Colonial Neglect

Educational systems, institutions, practices and curricula around the world continue to be based on, or heavily influenced by, colonial and neo-colonial models, ideas, worldviews and ideologies (Rizvi, Lingard & Lavia, 2006). Several African universities were established as part of the colonial project, modelled on the European institutions from the colonial centres (Zeleza, 2012; Mamdani, 2018). The purpose of colonial education in Africa was to develop local but 'Westernised' elites that would contribute to the maintenance of colonial rule (Ngũgĩ, 1986; Nyamnjoh, 2012; Basaran & Olsson, 2019). Colonial universities taught a Eurocentric curriculum that was designed for the European context, without any attempt to incorporate indigenous and other knowledges, worldviews and perspectives (Mkandawire, 1997; Maringe & Ojo, 2017). Similarly, research focus areas, interests and disciplines were imported from the colonial centres and imposed onto the colonised societies for the purpose of sustaining and maintaining colonial projects. The colonies were also used as laboratories where colonial scientists could test their often harmful hypotheses and theories (Tuhiwai Smith, 1999).

The post-independence period saw the expansion of higher education on the continent. However, the much-needed epistemic decolonisation did not take place in most African countries and institutions during this period, and African academia largely continued to model itself on the Eurocentric models and worldviews (Nyamnjoh, 2012; Mamdani, 2018; Nyamnjoh, 2019). As Mama (2007, p. 9) points out, after independence, African universities continued to institutionalise Eurocentric disciplines and curricula, with little attention given to the "epistemological implications of importing paradigms and methodologies generated in very different historical and cultural contexts". Even the institutions that emerged after political decolonisation and independence in Africa, have been shaped by the Eurocentric models, canon and curricula. Nyamnjoh (2019, p. 3) posits that African higher education institutions 'have not been

domesticated' since independence "through epistemological renegotiation informed by local languages, cosmologies and worldviews". Instead, they remain "trapped in the institutional and epistemic economies of Euro-American models and Eurocentricism" (Zeleza, 2012, p. 10). The African Union (2016) believes that the continent and its higher education systems and institutions are yet to fully confront the colonial and neocolonial legacies and influences and transform; these are what a number of scholars call the Westernised and Eurocentric universities in Africa (Mamdani, 2018; Mpofu & Steyn, 2021).

Apart from the challenges related to the colonial roots of many African universities and the lack of epistemic decolonisation after independence, the neglect, mismanagement and lack of investment in the higher education sector in the post-colonial period have resulted in substantial weakening of the universities and research institutions on the continent (Aina, 2010; African Union, 2014; Heleta & Bagus, 2021). In addition, violent conflicts and political instability in many African countries have led to the destruction of universities, exodus of academics and censorship of academic freedom (Aina, 2010). Moreover, structural adjustments and neoliberal impositions, promoted and imposed by international financial institutions, have since the 1980s contributed to the further marginalisation and impoverishment of African universities (Habib et al., 2008). Over a few decades, institutions such as the World Bank and the International Monetary Fund pressured African governments to prioritise primary and secondary education at the expense of higher education and research (Aina, 2010; Mouton, 2018; Heleta & Bagus, 2021). These policy prescriptions and impositions have led to the neglect of higher education across the African continent and the brain drain in academia, directly undermining the ability of universities and research institutions to conduct research and develop new knowledge (Mama, 2007; Habib et al., 2008; Zeleza, 2012; Chelwa, 2021). Mouton (2018) points out that the brain drain in the 1980s and 1990s, caused by the above-mentioned

challenges and impositions on the continent, was the main reason for the decline of African research output.

Despite the recent change in policy prescriptions by international financial institutions, many African higher education systems and universities have not been able to recover and rebuild their capacity for research, innovation and knowledge production. They continue to be under resourced and underfunded. The neglect of higher education on the continent was reinforced during the implementation of the Millennium Development Goals between 2000 and 2015, when the focus of development initiatives was on expanding and improving primary education around the world (United Nations, 2015). Furthermore, the much-needed changes are not expected to take place during the implementation of the Sustainable Development Goals, which do not focus on rebuilding and strengthening higher education systems and institutions in low-income countries (Heleta & Bagus, 2021). After the finalisation of the SDGs, the African Union (2016) released its own strategy for revitalisation of education, stressing the need to strengthen higher education, research and innovation in Africa after decades of neglect and marginalisation.

3. Internationalisation in African Higher Education

In this chapter, we frame internationalisation in African higher education through a decolonial lens. This framing "challenges the colonial vertical conceptions of internationalisation of higher education where 'the international' is Europe and North America" (Ndlovu-Gatsheni, 2021, p. 78) and where internationalisation is conceptualised based on the thinking, ideas, worldviews and practices developed in and for the global North (de Wit, 2012; Heleta & Chasi, 2022). This framing of internationalisation further aims to transform it – from a largely administrative task focused on operational and quantifiable activities such as international mobility of students and staff and signing of memorandums of

understanding for international collaboration – into a critical knowledge project underpinned by decolonial thinking and epistemic plurality (Ndlovu-Gatsheni, 2021).

Due to the colonial impositions and coloniality, African higher education institutions can be said to be highly internationalised. They in most cases have one of the European languages as a mode of instruction; the scholarship they consume is largely from Europe and North America; and the theories, methodologies, paradigms, discourses and epistemologies they engage with and which shape the thinking and worldviews of African scholars, are based on Eurocentric models and approaches (Teferra, 2020). This, however, is not something that should be celebrated, as it is the result of the historical colonial conquest and neocolonial domination in knowledge production and dissemination. Similarly, African universities have over the past few decades tended to replicate internationalisation concepts and practices from the global North instead of developing concepts and approaches relevant for their own contexts and realities (de Wit, 2012; Zeleza, 2012; Heleta & Chasi, 2022). The dominant approaches, frameworks and definitions of internationalisation of higher education from the global North are "devoid of epistemic and ideological thought" (Ndlovu-Gatsheni, 2021, p. 79) and contextual, historical and contemporary relevance in Africa. The replication of Eurocentric internationalisation approaches, practices and strategies at African institutions continues to facilitate and maintain the domination of the Euro-American epistemic canon and promotion of colonial impositions and Eurocentric knowledge as universal, neutral and objective knowledge that must be adapted and accepted by all. At the same time, through this process, indigenous knowledges and worldviews continue to be devalued, delegitimised and erased (Akena, 2012).

Stein (2017, p. 1) argues that the mainstream approaches to higher education internationalisation continue to be framed in ways that "further entrench colonialist, capitalist global relations, and reproduce the Euro-supremacist foundations of modern Western higher education." This way, the Eurocentric

knowledge is continuously reaffirmed as being the "centre of legitimate knowledge, the arbiter of what counts as knowledge and the source of 'civilised' knowledge" (Tuhiwai Smith, 1999, p. 63). Coloniality and Eurocentric hegemony still shape geopolitics, power relations, institutional structures and cultures, worldviews, representations, epistemic and curriculum choices in higher education and internationalisation around the world (Beck, 2021). The dominant geopolitics of knowledge bestows privileges on Eurocentric knowledge systems, which are seen as the only ones with the "social privilege to shape global thinking" (Shahjahan & Morgan, 2016, p. 95), while universities in Africa and elsewhere in the global South are expected to conform to and replicate this "global thinking".

Internationalisation of higher education in Africa continues to be heavily influenced by unequal power relations, Eurocentric notions, principles and knowledge, and internationalisation concepts and frameworks from the global North. Due to these many factors, the curricula at most African universities continue to be dominated by Euro-American scholarship (Nyamnjoh, 2012; Ndlovu-Gatsheni, 2021), while research methods and practices remain based on Eurocentric principles and norms (Tuhiwai Smith, 1999). African universities tend to partner and actively collaborate primarily with institutions from the global North (Jowi, 2009; Maringe & Ojo, 2017). This is despite the fact that the research partnerships between African institutions and their counterparts in the global North often resemble junior/ senior relations and are contributing to the entrenchment of Eurocentric domination in academia (Maringe, Foskett & Woodfield, 2013). Research collaborations between institutions, academics and researchers on the African continent remain negligible when compared to collaborations with the institutions and scholars outside the continent (Mouton & Blanckenberg, 2018). According to Jowi (2012), lack of funding is one of the main reasons for the lack of meaningful and sustainable intra-African partnerships and engagements.

4.   Funding Challenges and Dependence on External Donors in Africa

Lack of funding for higher education, research and innovation is one of the most pressing contemporary challenges facing African higher education and research sectors. In 2017, the average regional investment in research and development in North America and Western Europe was 2.5% of GDP; 2.1% of GDP in East Asia and the Pacific; 0.7% of GDP in Latin America and the Caribbean; and 0.4% of GDP in Sub-Saharan Africa (UNESCO, 2020). No country in Africa spends 1% of its GDP on research and development, even though African countries committed in 2006 to increase their spending to this level (African Union, 2016). For example, South Africa and Kenya spend 0.8% of their GDP on research and development; Tunisia spends 0.7%; Egypt, Ethiopia and Mali spend 0.6%; Botswana and Tanzania 0.5%; Ghana, Senegal and Namibia 0.4%; and Uganda and Nigeria 0.1%. In comparison, countries that spend more on research and development globally include South Korea (4.1%); Japan (3.4%); Germany (2.9%); United States (2.7%); Australia (2.2%); China (2%); Brazil and Malaysia (1.3%); and Russia (1.1%) (UNESCO, 2021).

South Africa is the only African country that provides considerable funding for research and development, particularly through the National Research Foundation (NRF). An analysis of research output by African researchers between 2009-2014 which indicated sources of funding shows that the NRF was the main funder. Apart from the NRF and the Tunisian Ministry of Higher Education and Scientific Research, all other funders were from outside the continent (Kozma, Calero Medina & Costas, 2018). According to UNESCO (2020), the major proportion of funding for research and development in South Africa comes from the government, followed by business and foreign funding. In Uganda and Mali, most of the funding comes from abroad, followed by government funding. In Ghana, Tanzania, Kenya, Rwanda and Mozambique, the majority of funding comes from the government, followed by foreign funding.

Due to the low investment in higher education and research on the African continent, higher education institutions often depend on external funding for their research activities. This is creating dependencies on foreign donors and often forces African institutions and academics to align their research priorities to those of the donors (Beaudry, Mouton & Prozesky, 2018a). According to Alphonsus Neba from the African Academy of Sciences, the role of external funders in funding research in Africa "is so pervasive that if they were to pull out, research on the continent would be seriously disrupted and, in most countries, it would literally grind to a halt" (in Omungo, 2018). An example of this is Makerere University in Uganda. Between 2000–2012, Makerere University was able to maintain its research capacity and engage in research projects only because it received funding primarily from Europe and the United States. During this time, the Uganda National Council for Science and Technology provided US $1.2 million of its own funds to the university. In comparison, over the same period, Makerere University received US $10 million from the European Union, US $16.5 million from the Carnegie Corporation, US $40 million from the government of Norway and US $62 million from the government of Sweden, to name a few external donors (Mouton, 2018). Arguably, without the external funding the university would not have been able to conduct most of its research activities.

5. Geopolitics and Power Dynamics in Knowledge Production

Nyamnjoh (2019) points out that global knowledge production is characterised by geopolitics and power dynamics that tend to be unfair, unequal, hegemonic, prescriptive and hierarchical. Briggs and Weathers (2016, p. 466) add that knowledge production and academic publishing are "rife with structural inequalities." Global knowledge-related power imbalances continue to be maintained through knowledge generation systems, with the structures and processes controlled by the institutions and academics from the global

North (Ndlovu-Gatsheni, 2018). Tuhiwai Smith (1999, p. 56) writes about the research "through imperial eyes" to describe research structures, systems, approaches and practices which assume that Eurocentric ideas and worldviews are the "only ideas possible to hold, certainly the only rational ideas, and the only ideas which can make sense of the world, of reality, of social life and of human beings." As articulated by Ba (2022, p. 557), globally, academia continues to be a "site of epistemic violence with distribution of power historically sedimented through colonialism and racism." Research and development of new knowledge, particularly in Africa, continue to be embedded in colonial practices (Tuhiwai Smith, 1999). Ba (2022, p. 557) asserts that this is evident in the contemporary research practices by many scholars from the global North who, while collaborating with African institutions and scholars, "still echo the colonial dynamics that underlined the first research projects conducted by Europeans during the colonial period."

In the research in and on Africa by scholars from the global North, "dynamics of domination, exploitation, and extraction" continue to be seen in research practices (Ba, 2022, p.558). Kessi, Marks and Ramugondo (2020, p. 273) write about the political economy of knowledge and research that are dominated by the global North and which focus on the extraction of data. The research that takes place between scholars from African institutions and their counterparts in the global North in most cases benefits the latter, "who, armed with assumed theoretical sophistication and economic resources" frequently reduce African scholars to collectors of data and research assistants (Nyamnjoh, 2012, p. 145). To be able to work on research projects and publish with scholars from the global North in academic journals that are in most cases based in the global North, or controlled by editorial boards dominated by European and North American scholars, African scholars often have to "mimic how Northern researchers would study their own continent if they are to have any success" (Chelwa, 2021, p. 95). De Waal (2015) argues that the research and scholarship about Africa by

African scholars "is operating at only a fraction of its true potential, and that it is hampered by the preferences, policies and politics of the Western academy." Due to all this, African research and scholarship continue to be shaped by Eurocentric ideas, worldviews, paradigms and methodologies instead of being grounded in the African historical and contemporary realities and drawing from the plurality of global knowledge (Zeleza, 2012).

Global academic knowledge production and dissemination systems continue to marginalise African scholars and scholarship (Kamola, 2012). The scholarship by academics and researchers based on the African continent – across fields and disciplines – tends to be ignored (Mama, 2007) and is cited less than the scholarship by academics based elsewhere in the world (Briggs & Weathers, 2016). Even the scholarship about Africa is dominated by the scholars from the global North (Mkandawire, 1997; Mama, 2007; Briggs & Weathers, 2016; Chelwa, 2021); what Hedt-Gauthier et al. (2019, p. 8) call the knowledge 'about Africa without Africa.' This continues unabated despite the fact that much of the scholarship about Africa from the global North is failing 'to give a credible account of what is happening in Africa' (Mkandawire, 1997, p. 26) due to the hegemonic Eurocentric worldviews, ideological blind spots and in some cases the lack of basic knowledge about the continent. Yet, the curriculum at most African universities continues to be dominated by this kind of Euro-American scholarship. In this way, the Westernised universities in Africa are failing to engage their students critically on African perspectives and realities (Nyamnjoh, 2012).

Global power imbalances in knowledge production and the continued Eurocentric epistemic hegemony are closely linked to the availability of funding for research and the practices of research funders. For example, a study of two decades of funding for global health research by the Gates Foundation shows that 88.4% or US $63 billion went to the institutions in the global North to primarily study health and other challenges in Africa and elsewhere in the global South

(Schwab, 2021). This way, the global South continues to be seen as a problem that global North's charity and 'know-how' can fix. All the while, the structural inequalities between the global North and South, based on colonial and neocolonial domination and exploitation, persist. The example about the Gates Foundation is not an isolated practice. Chibanda et al. (2021, p. 553) posit that 'institutional racism is built into academic policies, processes, and hierarchies.' This is often maintained by the international research funding structures and mechanisms, which continue to award the majority of funding to the institutions and scholars in the global North, while the institutions and scholars in the global South continue to be added to the funded projects as sub-awardees and research assistants.

6.   The Lack of Intra-African Research Collaboration: What the Data Tells Us

Due to the neoliberal impositions in the 1980s and 1990s, which resulted in neglect of higher education in Africa and brain drain in academia, Sub-Saharan Africa's share of global scientific publications declined from 1% in 1987 to 0.7% in 1996 (Tijssen, 2007). In 2005, the percentage of Africa's share of global scientific publications increased to 1.5%, and further grew to 3.2% in 2016 (Mouton & Blanckenberg, 2018). However, the steady increase of Africa's scientific output cannot be attributed to the increase in intra-African research collaboration over the same time period. African researchers and scientists collaborate primarily with their counterparts from outside the African continent (about 50% of co-authored papers), and with colleagues within their countries (about 40% of co-authorships). The intra-African research collaboration that results in research output and production of new knowledge has been negligible in the 2005-2016 period. This is illustrated in Figure 1.
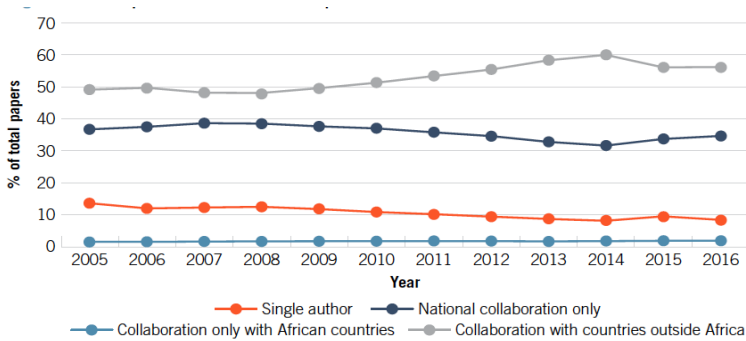
Figure 1: African international research collaboration (2005–
2016). Source: Mouton and Blanckenberg (2018)

A similar conclusion was made by Vieira and Cerdeira (2022)
in their study which looked at the research collaborations
within Africa. They found that over the past few decades,
African institutions and scientists have been participating in
international research networks and this led to an increase
in publications with scientists and researchers from outside
the continent. Their data, which encompasses the 1990-2018
period, shows that in most African countries, the number of
co-authored publications with collaborators from outside the
continent far outstrips the number of publications from intra-
African collaborations. In their study, Vieira and Cerdeira
(2022, p. 2015) also focused on intra-African academic and
scientific networks. While they found some evidence of
continental networks and collaborations, they emphasise that
there is still a 'long way to go to create more solid collaboration
networks for the exchange and creation of knowledge' on
the African continent. Similar collaboration trends to those
shown by Mouton and Blanckenberg (2018) and Vieira and
Cerdeira (2022) have been found in other studies focusing on
collaborative research by African researchers and scientists
(Asubiaro, 2019; Hedt-Gauthier et al., 2019; Asubiaro & Shaik,
2021; Onyancha, 2021; Heleta & Jithoo, 2023).

While the publications data in Mouton and Blanckenberg
(2018) focuses on the 2005-2016 period and Vieira and
Cerdeira (2022) focus on the 1990-2018 period, we do not

expect that there have been any significant improvements since 2018 as there have not been any groundbreaking changes in African higher education, whether we talk about funding or prioritisation of intra-African research collaboration. At the same time, while the data in figure 1 shows a negative picture when it comes to intra-African research collaboration, it also shows that African academics, researchers and scientists are involved in research collaborations and the majority of Africa's research output in the 2005-2016 period resulted in collaborative research output (around 90%). This means that the dynamics, skills and willingness to engage in collaborative international research exist on the continent. The data further indicates that there is a lot of work that must be done to increase and improve intra-African partnerships and collaborations in higher education and ensure that researchers across the continent are enabled and supported– by their governments, institutions and internationalisation practitioners–to participate in intra-African research projects which aim to develop new knowledge and solutions to the myriad of challenges facing Africa and the world.

One of the major limitations of bibliographic analysis of research collaboration involving African researchers is the fact that the majority of African journals are not indexed in the Web of Science and other global scientific bibliographic databases. This makes the research published in many African journals invisible in bibliographic studies (Asubiaro, 2019; Hedt-Gauthier et al., 2019). However, while bibliometric analyses of research collaborations have their limitations, they remain an important methodology for assessing collaborations in higher education (Onyancha, 2021) and offer an important insight into research collaborations that include African academics. Furthermore, while authorship is not the only way to measure research collaborations, it remains one of the main indicators for assessment of the extent of research engagements and collaborations involving academics and researchers (Hedt-Gauthier et al., 2019).

In addition to the above data about research output, the results of a survey of 7,513 African academics, researchers and

scientists by Mouton, Prozesky and Lutomiah (2018) show the types of academic collaboration they engage in. The majority of surveyed African researchers engage in collaboration with colleagues at their institutions. This is followed by international collaboration, collaboration with counterparts within the country, and lastly with scholars in other African countries. This is illustrated in figure 2 below:
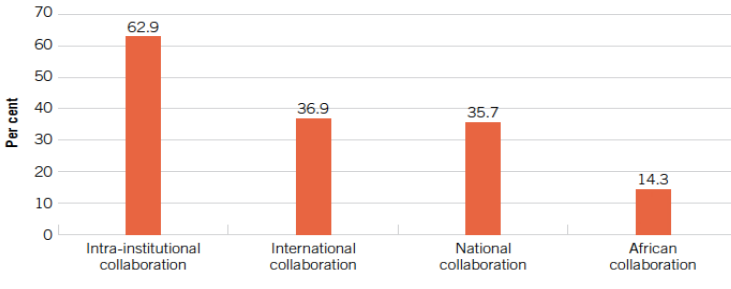
Figure 2: Types of collaboration in Africa. Source: Mouton, Prozesky and Lutomiah (2018)

This figure gives another important indication of the research collaboration trends in African higher education. It shows that intra-African collaboration lags behind other forms of collaboration and that much remains to be done to change this. This is despite the fact that a 2005 survey by the International Association of Universities (2005) found that the majority of surveyed African universities indicated that intra-African partnerships and collaborations were their main priorities. We can see from the two figures above that this has not translated into the growth of intra-African research collaborations and much work remains to be done to make this a reality. However, as in the case of the first figure which showed collaborative research output, the second figure also shows the eagerness to collaborate among African researchers and scientists, and the need to focus on expanding intra-African collaborative research opportunities while continuing to maintain and expand partnerships and collaborations within institutions and countries and with other parts of the world.

7.   How to Expand Intra-African Research Collaboration?

Beaudry, Mouton and Prozesky (2018b) argue that the increase in Africa's research output since 2005, and the expansion of international research collaborations with countries, institutions and scholars from outside the African continent, have been primarily influenced by the strategies and interventions of foreign institutions and donors, and not the strategies, policies and initiatives of the African Union, African governments or African higher education institutions. This could possibly explain the expansion of research collaborations and research output with the institutions and scholars outside the African continent. We believe that comprehensive and strategic support and initiatives – on the continental, regional and national levels – are necessary if we are to see an increase in research partnerships and collaborations within the African continent. The goals, visions, priorities and strategies driving African research cannot be shaped or decided by foreign governments, donors and institutions. The African Union, governments, higher education ministries and systems, universities, researchers, scientists and academics must decide on African priorities and increase Africa's research output through intra-African collaboration, while also maintaining and expanding their other linkages, partnerships and collaborations. Stronger links between African researchers and institutions would contribute to the promotion of research priorities that are relevant for the continent and its people (Onyancha, 2021). Asubiaro and Shaik (2021) stress that the expansion of intra-African research collaborations will be key for the continent's future, as externally developed solutions have not led to higher living standards and desired development in Africa.

African governments and other continental stakeholders must begin to mobilise resources needed for improvements in higher education and research sectors (Aina, 2010; Asubiaro & Shaik, 2021). One of the strategic objectives of the *Continental Education Strategy for Africa: 2016-2025* is the expansion and revitalisation of higher education, research and innovation

in order to be able to meaningfully and comprehensively address the challenges facing Africa and the world. The strategy highlights that, to improve research capacity and research output in African higher education, mobilisation of domestic funding, strengthening of higher education and research institutions, and the provision of adequate research infrastructure will be key. To achieve this, the African Union is calling on the African governments to honour their commitment to allocate 1% of their national GDP to research and innovation (African Union, 2016). This would go a long way to address capacity and infrastructure shortages in African higher education and would enable African institutions and researchers to develop their own research priorities instead of having to respond to external donor priorities and focus areas.

Due to the economic challenges on the African continent, African institutions will continue to depend on foreign funding for many of their research initiatives in the foreseeable future. Institutions and academics from the continent will also continue to collaborate with counterparts from outside Africa, and much of this research will be funded by foreign donors. There is therefore a need for African institutions, higher education leaders, researchers and academics to work together and put pressure on dominant institutions, organisations and funders of research – particularly those from the global North – and challenge structural inequalities, power dynamics, racism and unfair and unequal practices in higher education, research, academic collaboration and knowledge production. Chibanda et al. (2021, p. 554) note that "tackling systemic racism" and structural inequalities in international research collaboration will require the funders, institutions, researchers, academic book publishers and journals in the global North "to reckon with their own power and privilege and to push for a change in policies" that promote fair and equal research practices. Apart from this, there is an urgent need to take a stand against extractive research practices in Africa and the treatment of African researchers as field assistants by external researchers and institutions.

For Jowi (2012, p. 163), the most important work for strengthening intra-African research collaboration, which is key for Africa's higher education, research and innovation, will have to happen on the continent:

> "Africa's starting point would be to strengthen university collaborations within the continent to consolidate their areas of strength and develop a viable higher education and research area which they can then use to engage with the rest of the world. With this, Africa can change its position as a bystander and become a real player in the global knowledge society."

Ndlovu-Gatsheni (2013) argues that African universities must be the sites of relevant and critical research, teaching and learning which are rooted in African knowledges and ideas, while at the same time engaging extensively with scholars and knowledges from the rest of the world. Zeleza (2012, p. 3) adds that, to promote the knowledge project on the continent, African institutions must dismantle and decentre the Eurocentric hegemony and decolonise institutional cultures and knowledge in order to be able to develop 'empowering knowledges for the South and symmetrical forms of internationalisation in higher education.'

For decades, internationalisation of higher education on the African continent has been based on the concepts and approaches replicated from the global North (de Wit, 2012; Zeleza, 2012). Ndlovu-Gatsheni writes that these dominant approaches are based on 'colonial vertical conceptions of internationalisation' and Eurocentric worldviews, ideas and practices. To counter this, he calls for the dismantling of the Eurocentric hegemony and a 'horizontal non-colonial internationalisation of higher education' which is underpinned by the plurality of knowledges and a 'recognition of the diverse ways through which different people view and make sense of the world' (2021, p. 78-79). In practice, this would lead to the development of internationalisation concepts and approaches relevant for complex and distinctive African contexts and realities, and incorporation of all global knowledges in the

curriculum, teaching and research endeavours in African higher education. Zeleza (2012) stresses that African higher education must be comprehensively internationalised but the conceptualisation of internationalisation must focus on the expansion and strengthening of the African knowledge project and intra-African engagements, while at the same time engaging and collaborating with other parts of the world and their knowledges.

Ndlovu-Gatsheni (2021) highlights that there cannot be truly international higher education unless knowledge is first decolonised. In Africa, decolonisation of knowledge is not about erasure of any knowledges. Rather, it is about dismantling Eurocentric hegemony and centring Africa in everything that African universities, scholars, researchers, intellectuals, practitioners and students do (Lebakeng, Phalane & Dalindjebo, 2006). For Ngũgĩ (1986, p. 88), decolonisation of knowledge is a 'quest for relevance' of African education and knowledge and requires 'decolonisation of the mind' of African scholars, researchers and university leaders, as most of them have been "schooled largely in the white [and Eurocentric] tradition. This imprinted the culture of whiteness" among them (Maserumule, 2015), shaping their knowledge-related interests, preferences and choices to this day.

Epistemic decolonisation also entails building 'alternative spaces, networks and ways of knowing that transcend our epicolonial inheritance' (Kessi, Marks & Ramugondo, 2020, p. 271). This includes strengthening and expansion of intra-African research collaboration in order to develop African solutions for African challenges. The key aspect of epistemic decolonisation is that "subjectivity, situatedness and positionality matter" (African Union, 2015, p. 274). Africa-centred research and knowledge, conceptualised and developed through intra-African collaborations and decolonised research methodologies and approaches, can become prime vehicles for this. Placing Africa at the centre of scholarship, research and teaching would ground indigenous African knowledge systems, perspectives and experiences and

empower African scholars to develop contextually relevant knowledge (Nyamnjoh, 2012; Fomunyam, 2017). Intra-African research networks, partnerships and collaborations could become key platforms where this much-needed contextually relevant knowledge could be developed and shared with the world.

Internationalisation scholars and practitioners on the African continent must work together to rethink and reconceptualise internationalisation of higher education in line with Africa's historical and contemporary challenges, needs, priorities and visions, and align academic research with their national and institutional challenges and priorities. This calls for more critical engagements among Africa's internationalisation experts, scholars and practitioners in order to find practical ways to expand intra-African partnerships and collaboration in higher education. They need to work to convince their university leaders that internationalisation – conceptually relevant to Africa – must become a priority that is comprehensively integrated in everything the universities do. Internationalisation practitioners also need to actively promote intra-African engagement and collaboration, including student and staff mobility, virtual engagement and joint postgraduate studies. The progress towards the implementation of the *African Continental Qualifications Framework* and the *Revised Convention on the Recognition of Studies, Certificates, Diplomas, Degrees and Other Academic Qualifications in Higher Education in African States* (UNESCO, 2014) will be key in the process of strengthening intra-African collaboration in higher education.

University leaders, supported by internationalisation practitioners, have a responsibility to engage with national governments and ministries of higher education and source continental funding for intra-African research collaboration and academic and student mobility, and not leave their institutions, academics and students to depend on the funding from outside the continent which often comes with prescriptions and externally imposed conditions. In addition, African institutions, leaders and academics need to strengthen

and promote African academic publishing and journals in order to expand African scholarship and knowledge production. This includes indexing and online availability of African journals, preferably in open access. This would contribute to easy access and dissemination of knowledge developed in Africa, both on the continent and globally.

African higher education systems that are already integrated in international research networks – as in South Africa, Ghana, Nigeria, Kenya, Egypt and Cameroon – need to play a prominent role in expanding intra-African networks and collaborations and connecting other African countries to international research networks and collaborative opportunities that they belong to (Vieira & Cerdeira, 2022). In this way, the continent could see the expansion of multilateral international collaborations while also strengthening intra-African research collaborations between African partners in these collaborations. Furthermore, African institutions need to focus on the expansion of collaborations with the African academic diaspora around the world. This way, links with African scholars in various diaspora will be strengthened and their capacity will be utilised for the revitalisation of the African knowledge project, higher education and internationalisation (Jowi, 2012; Zeleza, 2012). African diaspora scholars can also lead the process of changing the way their institutions outside the African continent engage with Africa, pushing for a more fair and equitable engagement that is based on mutual respect and underpinned by the plurality of knowledges.

Due to the high costs of travel on the African continent, which can often take up much of the research budgets available to African academics and institutions, there is a need to invest in and expand virtual platforms and online modes of research collaboration and academic engagement. This could contribute to the expansion of virtual international engagements and internationalisation of research and curricula at African universities. There are also considerable challenges that must be overcome in this area, including the equipment, digital infrastructure and the high costs of fast and reliable internet

connectivity and data on the continent. However, this is an area that requires investment by governments, donors, higher education systems and institutions if intra-African research collaboration is to be strengthened and expanded.

8. Conclusion

Intra-African research collaboration is key for the promotion of research priorities and development of solutions that are relevant to the African continent and its people. However, over the past few decades, intra-African collaborations in higher education have been miniscule when compared to the partnerships and collaborations between African institutions and their counterparts in the global North and elsewhere in the world. In this chapter, we have highlighted historical, structural and systemic reasons behind the lack of intra-African research collaboration. These include the colonial roots of higher education, Eurocentric hegemony, postcolonial neglect and disinvestment in research and higher education in Africa, international funding structures that favour institutions from the global North, and the geopolitics of knowledge and global power dynamics that influence international collaboration and knowledge development. We have also unpacked structural, systemic and institutional changes that need to take place on the continent in order to strengthen African higher education and intra-African research collaboration. This includes strategic initiatives on the continental, regional and national levels aimed at increasing research partnerships and collaborations within the African continent. To achieve this, mobilisation of continental funding for strengthening higher education and research institutions and enabling research collaboration in Africa will be key.

Decolonisation of knowledge is of utmost importance if African institutions are to dismantle Eurocentric hegemony and become grounded in the African historical and contemporary realities while also drawing from the plurality of global knowledges (Zeleza, 2012). This way, African

universities would become sites of relevant research and scholarship rooted in African realities, knowledge and ways of knowing, while also engaging extensively with scholars and knowledges from the rest of the world. Internationalisation of higher education can drive the expansion of intra-African partnerships and collaborations. However, for this to happen, internationalisation in Africa needs to be reconceptualised and redefined based on the complex and distinctive African contexts and realities (see Heleta & Chasi, 2022). Contextually relevant internationalisation needs to focus on the expansion and strengthening of the African knowledge project and intra-African collaborations and engagements, while at the same time engaging and collaborating with other parts of the world and their knowledge systems.

To make this a reality, internationalisation scholars and practitioners on the African continent must strengthen their own engagement and collaboration and find ways to expand intra-African partnerships in higher education. More research is needed on the reconceptualisation of internationalisation in Africa, including the possible need for different concepts and definitions that are informed by regional or national challenges, needs and priorities in diverse African settings. Research is also needed on the ways intra-African collaboration in higher education can overcome linguistic and other barriers on the continent, while at the same time promoting African indigenous languages in higher education. We need to know more about successful intra-African research collaborations, as well as the challenges African researchers face when they collaborate with their counterparts on the continent. Finally, more work and research are needed on the ways the global North's hegemonies in higher education, research and knowledge production and dissemination can be dismantled while at the same time promoting horizontal internationalisation of higher education underpinned by the plurality of knowledge and ways of knowing and thinking about the world (Ndlovu-Gatsheni, 2021).

References

African Union. (2014). *AU outlook on education report: continental report*. African Union.

African Union. (2015). *Agenda 2063: The Africa we want.* African Union. Retrieved from https://au.int/Agenda2063/popular_version

African Union (2016). *Continental education strategy for Africa: 2016-2025.* African Union.

Aina, T.A. (2010). Beyond reforms: The politics of higher education transformation in Africa. *African Studies Review*, *53*(1), pp. 21-40. https://doi.org/10.1353/arw.0.0290

Akena, F.A. (2012). Critical analysis of the production of Western knowledge and its implications for Indigenous knowledge and decolonisation. *Journal of Black Studies*, *43*(6), pp. 599-619. https://doi.org/10.1177/0021934712440448

Asubiaro, T. (2019). How collaboration type, publication place, funding and author's role affect citations received by publications from Africa: A bibliometric study of LIS research from 1996 to 2015. *Scientometrics, 120*, pp. 1261-1287. https://doi.org/10.1007/s11192-019-03157-1

Asubiaro, T.V. & Shaik, H. (2021). Sub-Saharan African countries' COVID-19 research: An analysis of the external and internal contributions, collaboration patterns and funding sources. *Open Information Science*, 5, pp. 263-277. https://doi.org/10.1515/opis-2020-0125

Ba, O. (2022). 'The Europeans and Americans don't know Africa': Of translation, interpretation, and extraction. *Millennium: Journal of International Studies*, *50*(2), pp. 548-560. https://doi.org/10.1177/03058298211063927

Basaran, T. & Olsson, C. (2019). Becoming international: On symbolic capital, conversion and privilege. *Millennium: Journal of International Studies*, *46*(2), pp. 96-118. https://doi.org/10.1177/0305829817739636

Beaudry, C., Mouton, J. & Prozesky, H. (2018a). Lack of funding. In C. Beaudry, J. Mouton & H. Prozesky (Eds.) *The next generation of scientists in Africa,* pp. 71–88. African Minds. https://doi.org/10.47622/978-1-928331-93-3

Beaudry, C., Mouton, J. & Prozesky, H. (2018b). Conclusions and recommendations. In C. Beaudry, J. Mouton & H. Prozesky (Eds.), *The next generation of scientists in Africa,* pp. 175–182. African Minds. https://doi.org/10.47622/978-1-928331-93-3

Beck, K. (2021). Beyond internationalisation: Lessons from post-development. *Journal of International Students, 11*(S1), pp. 133–151. https://doi.org/10.32674/jis.v11iS1.3847

Briggs, R.C. & Weathers, S. (2016). Gender and location in African politics scholarship: The other white man's burden? *African Affairs*, *115*(460), pp. 466–489. https://doi.org/10.1093/afraf/adw009

Chelwa, G. (2021). Does economics have an 'Africa problem'? *Economy and Society*, *50*(1), pp. 78–99. https://doi.org/10.1080/03085147.2021.1841933

Chibanda, D., Jack, H.E., Langhaug,, L., Alem, A., Abas, M., Mangezi, W., Hanlon, C., Sorsdahl, K., Kagee, A., Weiss, H., Musesengwa, R., Kidia, K., Udedi, M., Nhamo, D., Fekadu, W., Demissie, M. & Lund, C. (2021). Towards racial equity in global mental health research. *The Lancet Psychiatry*, *8*(7), pp. 553–555. https://doi.org/10.1016/S2215-0366(21)00153-X

De Waal, A. (2015). *A social science in Africa fit for purpose.* Keynote address at the Next Generation Social Sciences in Africa workshop held in Addis Ababa, Ethiopia in July 2015. http://nextgen.ssrc.org/read/conversations/towards-a-social-science-in-africa-fit-for-purpose/

de Wit, H. (2012, 16 September). Africa must lead innovation in higher education internationalisation. *University World News.* https://www.universityworldnews.com/post.php?story=20120912160836275

Fomunyam, K.G. (2017). Decolonising the future in the untransformed present in South African higher education. *Perspectives in Education*, *35*(2), pp. 168-180. https://doi.org/10.18820/2519593X/pie.v35i2.13

Habib, A., Morrow, S. & Bentley, K. (2008). Academic freedom, institutional autonomy and the corporatised university in contemporary South Africa. *Social Dynamics*, *34*(2), pp. 140-155. https://doi.org/10.1080/02533950802280022

Hedt-Gauthier, B.L., Jeufack, H.M., Neufeld, N.H., Alem, A., Odhiambo, J., Boum, Y., Shuchman, M. & Volmink, J. (2019). Stuck in the middle: a systematic review of authorship in collaborative health research in Africa, 2014–2016. *BMJ Global Health*, *4*, pp. 1-10. https://doi.org/10.1136/bmjgh-2019-001853

Heleta, S. & Bagus, T. (2021). Sustainable development goals and higher education: Leaving many behind. *Higher Education*, *81*(1), pp. 163-177. https://doi.org/10.1007/s10734-020-00573-8

Heleta, S. & Chasi, S. (2022). Rethinking and redefining internationalisation of higher education in South Africa using a decolonial lens. *Journal of Higher Education Policy and Management*, https://doi.org/10.1080/1360080X.2022.2146566

Heleta, S. & Jithoo, D. (2023). International research collaboration between South Africa and rest of the world: An analysis of 2012–2021 trends. *Transformation in Higher Education, 8*(0), a246, pp. 1-11. https://doi.org/10.4102/the.v8i0.246

International Association of Universities. (2005). *IAU global survey on internationalisation of higher education*. International Association of Universities.

Jowi, J. (2009). Internationalisation of higher education in Africa: Developments, emerging trends, issues and policy implications. *Higher Education Policy*, 22, pp. 263-281. https://doi.org/10.1057/hep.2009.8

Jowi, J.O. (2012). African universities in the global knowledge economy: the good and ugly of internationalisation. *Journal of Marketing for Higher Education*, 22(1), pp. 153–165. https://doi.org/10.1080/08841241.2012.705799

Kamola, I. (2012). Reading the global in the absence of Africa. In A.B Tickner & D.L. Blaney (Eds.), *Thinking international relations differently,* pp. 183–204. Routledge.

Kessi, S., Marks, Z. & Ramugondo, E. (2020). Decolonizing African Studies. *Critical African Studies*, 12(3), pp. 271–282. https://doi.org/10.1080/21681392.2020.1813413

Kozma, C., Calero Medina, C. & Costas, R. (2018). Research funding landscapes in Africa. In C. Beaudry, J. Mouton & H. Prozesky (Eds.), *The next generation of scientists in Africa,* pp. 26–42. African Minds.

Lebakeng, J.T., Phalane, M.M. & Dalindjebo, N. (2006). Epistemicide, institutional cultures and the imperative for the Africanisation of universities in South Africa. *Alternation*, 13(1), pp. 70–87.

Mama, A. (2007). Is it ethical to study Africa? Preliminary thoughts on scholarship and freedom. *African Studies Review,* 50(1), pp. 1–26. https://doi.org/10.1353/arw.2005.0122

Mamdani, M. (2018, 19 July). The African university. *London Review of Books.* 40(14). https://www.lrb.co.uk/v40/n14/mahmood-mamdani/the-african-university

Maringe, F., Foskett, N. & Woodfield, S. (2013). Emerging internationalisation models in an uneven global terrain: findings from a global survey. *Compare: A Journal of Comparative and International Education*, 43(1), pp. 9–36. https://doi.org/10.1080/03057925.2013.746548

Maringe, F. & Ojo, E. (2017). Sustainable transformation in a rapidly globalising and decolonising world: African higher education on the brink. In F. Maringe & E. Ojo (Eds.), *Sustainable transformation in African higher education,* pp. 25-39. Sense Publishers. https://doi.org/10.1007/978-94-6300-902-7_2

Maserumule, M.P. (2015, 25 November). Why Africa's professors are afraid of colonial education being dismantled. *The Conversation.* https://theconversation.com/why-africas-professors-are-afraid-of-colonial-education-being-dismantled-50930

Mkandawire, T. (1997). The social sciences in Africa: Breaking local barriers and negotiating international presence. *African Studies Review*, *40*(2), pp. 15-36. https://doi.org/10.2307/525155

Mouton, J. (2018). African science: A diagnosis. In C. Beaudry, J. Mouton & H. Prozesky (Eds.), *The next generation of scientists in Africa,* pp. 3-12. African Minds.

Mouton, J. & Blanckenberg, J. (2018). African science: A bibliometric analysis. In C. Beaudry, J. Mouton & H. Prozesky (Eds.), *The next generation of scientists in Africa,* pp. 13-25. African Minds.

Mouton, J., Prozesky, H. & Lutomiah, A. (2018). Collaboration. In C. Beaudry, J. Mouton & H. Prozesky (Eds.), *The next generation of scientists in Africa,* pp. 147-173. African Minds.

Mpofu, W. & Steyn, M. (2021). The trouble with the human. In M. Steyn & W. Mpofu. (Eds.), *Decolonising the human: Reflections from Africa on difference and oppression*, pp. 1-24. Wits University Press. https://doi.org/10.18772/22021036512.4

Ndlovu-Gatsheni, S.J. (2013). Why decoloniality in the 21st century? *The Thinker, 48*, pp.11-15.

Ndlovu-Gatsheni, S.J. (2018). The dynamics of epistemological decolonisation in the 21st century: Towards epistemic freedom. *Strategic Review for Southern Africa, 40*(1), pp.16–45. https://doi.org/10.35293/srsa.v40i1.268

Ndlovu-Gatsheni, S.J. (2021) Internationalisation of higher education for pluriversity: a decolonial reflection. *Journal of the British Academy*, *9*(s1), pp. 77–98. https://doi.org/10.5871/jba/009s1.077

Ngũgĩ, W.T. (1986). *Decolonising the mind: The politics of language in African literature.* James Currey.

Nyamnjoh, F. B. (2012). 'Potted plants in greenhouses': A critical reflection on the resilience of colonial education in Africa. *Journal of Asian and African Studies*, 47(2), pp. 129-154. https://doi.org/10.1177/0021909611417240

Nyamnjoh, F.B. (2019). Decolonising the university in Africa. In *Oxford Research Encyclopedia of Politics,* pp. 1–33. Oxford University Press. https://doi.org/10.1093/acrefore/9780190228637.013.717

Omungo, R. (2018, 14 November). Africa's science 'millionaires': survey spotlights top-funded researchers. *Nature.* https://doi.org/10.1038/d41586-018-07418-6

Onyancha, O.B. (2021). Regional and international research collaboration and citation impact in selected sub-Saharan African countries in the period 2000 to 2019. *Global Knowledge, Memory and Communication*, *70*(6/7), pp. 577-594. https://doi.org/10.1108/GKMC-04-2020-0039

Rizvi, F., Lingard, B. & Lavia, J. (2006). Postcolonialism and education: negotiating a contested terrain. *Pedagogy, Culture & Society*, *14*(3), pp. 249-262. https://doi.org/10.1080/14681360600891852

Schwab, T. (2021, 6 October). The Gates Foundation avoids a reckoning on race and power. *The Nation.* https://www.thenation.com/article/society/gates-foundation-colonialism/

Shahjahan, R. A. & Morgan, C. (2016). Global competition, coloniality, and the geopolitics of knowledge in higher education. *British Journal of Sociology of Education*, 37(1), pp. 92-109. https://doi.org/10.1080/01425692.2015.1095 635

Stein, S. (2017). The persistent challenges of addressing epistemic dominance in higher education: Considering the case of curriculum internationalisation. *Comparative Education Review*, 61(S1), pp. 1-26. https://doi.org/10.1086/690456

Stein, S. & Silva, J.E. da (2020). Challenges and complexities of decolonising internationalisation in a time of global crises. *ETD - Educação Temática Digital,* 22(3), pp. 546-566. https://doi.org/10.20396/etd.v22i3.8659310

Teferra, D. (2020). The irrelevance of the re-configured definition of internationalisation to the Global South. *International Journal of African Higher Education*, 7(2), pp. 157-172. https://doi.org/10.6017/ijahe.v7i2.12905

Tijssen, R. (2007). Africa's contribution to the worldwide research literature: New analytical perspectives, trends, and performance indicators. *Scientometrics*, 71(2), pp. 303-327. https://doi.org/10.1007/s11192-007-1658-3

Tuhiwai Smith, L. (1999). *Decolonising methodologies: Research and indigenous peoples.* Zed Books.

UNESCO. (2014). *Revised Convention on the Recognition of Studies, Certificates, Diplomas, Degrees and Other Academic Qualifications in Higher Education in African States.* UNESCO.

UNESCO. (2017). *Six ways to ensure higher education leaves no one behind.* Policy Paper No. 30. UNESCO.

UNESCO. (2020). *Global investment in R&D.* Fact Sheet No. 59. UNESCO.

UNESCO. (2021). *How much does your country spend on R&D?* UNESCO Institute for Statistics. http://uis.unesco.org/apps/visualisations/research-and-development-spending/

United Nations. (2015). *The Millennium Development Goals report 2015.* United Nations.

Vieira, E.S. & Cerdeira, J. (2022). The integration of African countries in international research networks. *Scientometrics*, *127*, pp. 1995-2021. https://doi.org/10.1007/s11192-022-04297-7

Zeleza, P.T. (2012). *Internationalisation in higher education: Opportunities and challenges for the knowledge project in the global South.* Keynote address. Southern African Regional Universities Association (SARUA) Leadership Dialogue on Building the Capacity of Higher Education to Enhance Regional Development, Maputo, Mozambique, 21-22 March 2012.

Chapter 3

Intercontinental Collaborations and their Impact on Africa's Higher Education

Smangele Nzama 🆔
Durban University of Technology

Abstract

Higher education on the African continent has been evolving over the past two decades. Higher education refers to an educational level after graduating high school (matric), and is provided by universities, universities of technology and colleges for three or four years and at completion students are awarded degrees. Although some African countries are still faced with challenges that adversely affect higher education, there are engagements in place to assist in enhancing the quality of higher education in these African countries. One of the major challenges discussed at length by academics is that a larger number of students is seen dropping out before completing their degrees. This is due to many factors such as a lack of funding, poor family background, poverty, pregnancy etc. There are engagements in place to help students in need to fund their studies, such as bursaries and grants/scholarships, both local and international, such as the Fulbright scholarship programme.

Post-apartheid, some researchers have found a transformation in the curriculum in terms of the engagement of students and educators. Yet other researchers argue that the African higher education scenario is a product of colonial powers and uneven power relations. It is no public secret that some African universities are still providing degrees that are

outdated, and their academic curriculum is still colonized. In terms of decolonizing the curriculum, there is still a long way for African higher education to go. During those early years democracy, institutions in the North fostered a commitment to assisting in the development of academic institutions in emerging nations as part of their academic purpose. These developments in the African higher education space were funded by developed countries. The collaboration between African institutions and international institutions have evolved over time. African higher education is investing in collaborations with international universities to ensure that students are also exposed to international education, such as the COIL initiative (Collaborative Online International Learning). European countries' academic institutions have shown interest in working together with African higher education institutions to develop strategies that will improve African education.

This chapter will focus on the different collaborations in place in African higher education and discuss their impact on education.

1.   Internationalisation and Development of African higher education

African higher education is facing enormous problems in the 21st century. Not only is the desire for accessibility irrepressible, especially given Africa's historically low post-secondary enrolment levels, but higher education is also acknowledged as a critical driver for modernization and development (Teferra & Altbachl, 2004). Additionally, higher education has been identified and acknowledged as an important facilitator of Africa's development process. However, higher education in Africa has consistently faced a number of obstacles, particularly as societal demands have increased. With scant resources, insufficient capacity and a history of neglect, the sector has struggled to meet these expanding demands over the years, resulting in continuous capacity deficits (Kwaramba & Mukanjari, 2013). Africa is one of the

world's largest continents, and its higher education has been linked to the Western system since the 18ᵗʰ century through the colonial ties formed (Alemu, 2014). In today's globalized world, it is critical to prepare university students for job markets by providing them with a set of transferable abilities across sectors and cultures. These abilities can be developed through international study experiences. Internationalisation is an essential component of higher education in the twenty-first century (Fourie & Neale-Shutte, 2006). Higher education in Africa has achieved drastic change in recent years, such as impressive growth in relation to the number and variety of universities and academic programmes. Thus, enrolment growth is accelerating, quality assurance standards are being developed, and institutional governance is being strengthened. These transformations are the outcome of numerous local and international recent developments that have allowed the industry to reclaim its major role in Africa's growth. The expanding impact of internationalisation on Africa's higher education system is one of the new developments (Kwaramba & Mukanjari, 2013).

In a study conducted by Zolfaghari, Sabran, and Zolfaghari (2009), the term 'internationalisation of higher education' is defined variously by the many stakeholders involved, such as the government, the corporate sector, the university, the academic staff, the academic field, and the students. Many programme methods for the internationalisation of higher education are based on these divergent perspectives for a variety of reasons. Language, academic progress and financial inequality all have an impact on how motivated and capable institutions are to internationalise in the global setting. Higher education officials must be prepared to follow and comprehend the widest global trends in higher education, as well as the internationalisation of higher education in particular, while also effectively attending to the distinctive needs and aspirations of individual institutions, local communities and the country-wide context (Rumbley, Altbach, & Reisberg, 2012).

African and other developing nations could employ knowledge to close the income gap between themselves and richer nations. In order to face this challenge, these countries will need to build and improve their higher education institutions. The world of higher education, on the other hand, is changing and internationalisation is one of the key forces impacting and defining higher education (HE) at this moment (Oyewole, 2009). Over the years, tertiary education in developing countries has been shaken by numerous gusts of innovation. This has been notably evident in the world's economically developing nations, particularly those in Sub-Saharan Africa that have become overly reliant on external development assistance (King, 2020). Research is one of the most important activities that take place at higher education facilities. As the twenty-first era is acknowledged as a knowledge period, universities and other institutions of higher learning are required to perform more research in order to produce the necessary knowledge and to create information applicable to their specific context. As a result, interdisciplinary research work amongst higher learning institutions in the Global South and North has been viewed as vital in increasing individual academics' and institutions' intellectual output (Molosi-France & Makoni, 2020).

Over the last two decades, universities' foreign operations have grown in size, complexity and intricacy. The international initiatives vary from traditional study-abroad programmes that allow students to learn about different cultures to offering access to higher education in nations where local institutions are unable to satisfy demand. Other efforts emphasise improving students' international perspectives and skills, improving foreign language programmes, and promoting cross-cultural understanding (P. G. Altbach & Knight, 2007). The term's meaning, rationale and manifestation in many situations show the complexity and shifting dynamics of internationalisation. Many terminologies have been employed in relation with internationalisation, further complicating its definition (Jowi, 2012). Globalisation is defined as the economic, political and societal forces

driving higher education in the twenty-first century towards greater international involvement. For the first time, global capital has extensively capitalised on knowledge industries around the world, including higher education and advanced training. This replicates the advent of the 'knowledge society', the increase of the service industry, and numerous societies' reliance on knowledge products and highly educated personnel for economic prosperity (P. G. Altbach & Knight, 2007). African universities have a great desire to internationalise in order to strengthen and consolidate their capacity in teaching, research, scholarship and innovation. International relationships, policy/model imports, invitations to Western technical advisers, student mobility, and other forms of internationalisation are examples. International agents, assistance providers and institutions drive bilateral relationships. These interactions are inextricably related to aid, which is conditional and has a significant impact on national policies and structures, as well as academics (Alemu, 2014).

2.   Collaborations and Partnership

In higher education, an integrated approach to internationalisation through foreign cooperation is widely employed and recognized as vital. When one partner produces a larger financial contribution than the other due to superior economic power, the stronger partner's impact on partnership decision-making procedures is likely to be greater. Universities may use this mechanism to obtain a competitive advantage, especially when the partners differ significantly in size, shape, research output, reputation and economic power (Hagenmeier, 2015). Partnerships in education and development are defined as mutually beneficial alliances between two or more institutions, such as enterprises, industries, universities, non-governmental organisations (NGOs), school systems and service organisations (Semali, Baker, & Freer, 2013).

2.1   *Funding*

Student loan schemes in Africa (Experton & Fevre, 2010)

Many countries have loan programmes to help students pay for their higher education expenses. These loan programmes allow students to borrow money from government agencies or commercial banks to pay for their tuition or living expenses. Student loans must be repaid once the student has completed their studies (Woodhall, 1992). Student loan schemes in Africa were established initially not to enable cost recovery, but rather to support student living expenditures in a less expensive manner than grants (Johnstone, 2015). The following are loan schemes in African Higher education:

Botswana Grant-loan scheme administered by the Department of Student Placement and Welfare (DSPW)

In 1995, the Department of Student Placement and Welfare (DSPW) implemented a Grant/Loan Scheme. The programme is intended to encourage more students to pursue important occupations and professions. Students entering high-priority areas receive priority assistance over those pursuing less-important sectors (Leader, Weeks, & Leader, 2009). The loan/grant system was reviewed in 2008 in an attempt to solve some of the issues that had arisen after it was incorporated (Pillay, 2010). Botswana's contentious grant/loan scheme has supported over 100 000 students. One out of every ten students studied in sectors with critical skills shortages (Morris, 2015).

Table 1:   Grant eligibility categories

Group	Sector	Full/ Partial Grant
Category 1	sciences, medicine, and engineering	Full grant (including tuition and living expenses
Category 2	economics, town planning, and agricultural science	Partial grant (Full tuition grant and 50% loan on living expenses)

Group	Sector	Full/ Partial Grant
Category 3	law, journalism, social work, and psychology	Partial grant (Full tuition subsidy and 100% loan for living allowances
Category 4	sociology, philosophy, and physical education	Partial grant (50% loan on tuition and 100% loan on living expenses)
Category 5	cosmetology, photography, and performing arts	100% loan (tuition and living allowances)

Source: (Morris, 2015)

This grant played a significant role in providing students with funding, especially those who wished to study further in higher institutions. It funded students whilst also encouraging them in studying in the sector with shortages of skilled employees. This meant that most of the students that will graduate will have a higher likelihood of getting employment and be able to pay back the loan/grant.

Burkina Faso FONER loans

In 1994, The National Fund for Education and Research (FONER) was established by Decree, with an aim of assisting students to pay loans and grants. According to the Decree, the goals of FONER are as follows:

· assisting with infrastructure and research,
· assisting with the manning of facilities or services in equipment,
· involvement in financing activities for continuing education and personal growth in teaching and research, as well as
· assistance for any action related to assisting national educational and research endeavours (Van Lill & Gaillard, 2014).

In 2006, there were 30 472 students enrolled in public higher education institutions in Burkina Faso, with a predicted number of 75 200 students in 2015, representing a 2:5 ratio. Since the 1990s, this stipend has been based on merit and amounts to CFA 500,000 per student yearly (Some, 2010).

According to Bank (2017)fᵃp^, FONER collaborates with higher education institutions to improve access and the quality of education in key regions. This collaboration increases the enrolment of students in higher education institutions as they are now able to afford the tuition fees. In 2020, the scholarship decided to buy at least 50 000 computers to students amidst the covid-19 breakout. This initiative aimed to provide access for students to education, while the higher education institutions were suspended during lockdown (Telecom, 2020).

Ethiopia Graduate tax

Cost sharing was implemented in higher education institutions in Ethiopia following the publishing of the Higher Education Proclamation and Cost Sharing Regulations in October 2003. Any graduate student who has a payback obligation and has graduated from a public higher education institution is required to contribute to the cost of education, training and other services. After graduation, the fee will be paid as a tax withheld from one's income or other earnings. The chosen technique is a Graduate Tax, which is based on Australia's Income Contingent Repayment System but has been slightly modified/adapted for usage in Ethiopia (Yizengaw, 2007). The Higher Education Cost-Sharing Council of Ministers Regulation established a graduate tax as a technique to recover student loans, which were initially given to students to assist with living expenses during varsity. The process of collecting the money includes obtaining a fixed rate of 10% from the income of the student until the loan is fully recovered. The students who pay their loan in a lump sum in advance will get a discount of 5%, while those who pay as a lump sum in the first year following graduation will receive a 3% reduction (Marcucci & Johnstone, 2007).

Higher education enrolment in Ethiopia is quite low (about 1.5%), contributing significantly to the acute shortage of educated and qualified human resources. Ethiopia's higher education system is shifting away from exclusive and depressingly low enrolments and towards more involvement. To increase access, correction of inequitable taxpayer subsidies to a small part of the age cohort, and diversifying revenue and cost sharing was introduced to complement public money (Yizengaw, 2007).

Ghana Students Loan Trust Fund (SLTF), introduced in the 2006/07 academic year

The SLTF, a new student loan programme established by an act of parliament in 2005 to replace the Social Security and National Insurance Trust (SSNIT) loan scheme, began operations in 2006. The SLTF is a Ministry of Education-affiliated public service organisation. It is supported by a combination of public funds, SSNIT loans and private/corporate contributions. To improve proximity, the SLTF has zonal and campus offices located around the country. SLTF loans are available to students enrolled in accredited programmes at accredited private and public higher institutions (Dary & James, 2018). The Trustee Incorporation Act 1962, Act 106, established the Students Loan Trust Fund (SLTF) in December 2005. The Student Loan Trust Fund Act, Act 820 (2011), was approved by the Government of Ghana as part of measures to make accredited university education more accessible to the majority of qualified Ghanaian students. It provides for the efficient and effective dispensing of loans to tertiary students. The Trust Fund is responsible for recovering student loans after they have completed their higher education (Oduro-Mensah & Biney, 2014).

Higher education is often seen as both a drag on economic growth and a policy tool for promoting individual economic mobility and social fairness. The rising cost and returns on a college education have resulted in significant rises in the demand for student loans in numerous countries, including Kenya, Uganda, Tanzania and Ghana (Owusu-Antoh,

2019). For example, universities in Ghana have faced serious constraints such as inadequate and dilapidated infrastructure; falling standards; relevance and quality of programmes due to ineffective instruction; and a lack of motivation on the part of faculty, resulting in an unbridled emigration of qualified teachers. With dwindling financial resources, the student loan system, a complicated cost-sharing arrangement, has emerged as an alternate strategy to mitigating the financial crisis that polytechnics and universities experience (Atuahene, 2008; Dary & James, 2018).

Kenya HELB, introduced in 1995

Since independence, Kenyan higher education financing has evolved through a variety of funding models, ranging from complete support to cost-sharing and even private participation (Odebero, Bosire, Sang, Ngala, & Ngware, 2007). Since its inception, the Higher Education Loan Board has assisted over 645 000 students in pursuing further education at both public and private universities, technical training institutes and polytechnics. The major purpose of HELB is to ensure that every Kenyan receives funding and that he can repay it gradually with interest. As a result, previous recipients are defaulting, denying the board a staggering Sh8.5 billion (Abdulrahman, 2020). The Higher Education Loans Board (HELB) was created by the government in 1995. It was tasked with expediting the payment of loans, scholarships and bursaries to deserving students, reclaiming all outstanding loans disbursed since 1952 through the old Higher Education Loans Fund (HELF), and establishing a revolving fund from which monies may be drawn (Kossey & Ishengoma, 2017).

A study conducted by Onang'o and Orodho (2016) highlighted that the first highly ranked consequence of the present level of HELB loan on students' involvement in university study was the loan's insufficiency, which resulted in the majority of students dropping out. The HELB loan did not meet students' expectations since the inadequate loan allocation caused most students to cancel their semesters, leaving them behind their fewer disadvantaged

contemporaries. However, according to the HELB (2020) report to present, the HELB has distributed around Kshs. 113.1B to 1 002 070 students. Throughout the years, the number of loan recipients and the student loan budget have grown dramatically.

Lesotho National Manpower Development Secretariat loan grant scheme

The NMDS is a government department in Lesotho that reports to the Ministry of Finance and Development Planning. It was founded in 1978. Its mandate is to handle all training and scholarship issues. The NMDS scholarship is a 'soft loan' that recipients must repay once they have completed their term of study. The NMDS sponsors students to study at post-secondary institutions in Lesotho, the Republic of South Africa, Botswana, Swaziland, and other nations (Nchaka, 2009). The National Manpower Power Development Council Act 8 of 1978 was enacted in order to facilitate the granting of loan bursaries from a fund controlled by the National Manpower Development Secretariat (Nkisi, 2021).

NMDS implemented a quota system in which the department limits the number of new students it is willing to sponsor at each higher education institution in the forthcoming academic year. This trend often resulted in a decrease in enrolments in higher education institutions due to students who did not get NMDS financing being unable to pay for themselves (Tlali & Hapazari, 2018).

Malawi University Students Loan Scheme

Students in Malawi have been obliged to contribute financially to their university education since 1985. Various finance systems, including loan programmes, have been devised to allow students from low-income families to benefit from university education (Dunga, 2013). Malawi's public universities are supported or subsidized by the government. In 2001, a cost-sharing mechanism for universities was introduced, but it was met with strong opposition from university student unions (Shawa, 2014). Amongst other

things, the newly established Public Universities Student Loan Programme compels students to pay 17% annual interest on tuition and book allowance loans. Student unions claim that not only are many of the new scheme's provisions ambiguous, but that it also restricts access to higher education, which is a sensitive topic in Malawi. The student discontent comes just a few months after the government decided to implement a 220% increase in university fees, despite complaints from the general public, political parties and student organisations that it would impede access to higher education (Mashininga & Ndovi, 2011).

The price tag on college is undoubtedly a source of concern in Malawi, as evidenced by the ongoing call for the government to boost its budget on higher education as a percentage of GDP [gross domestic product], and to prioritize access for the majority based on merit rather than socio-economic status. Almost 15 000 poor students requested loans in the 2015/16 academic year, but only 5 000 were approved. This accounts for 30% of all poor enrolees. The outcome would be a probable dropout of 10 000 pupils, accounting for 70% of the enrolment (Ross, 2018).

Namibia Student Financial Assistance Fund, created in 1997.
Student Financial Support Schemes (SFSS) have grown in importance in both developed and developing countries for providing financial aid to students pursuing higher education (Kaulinge, 2011). As a loan/grant initiative of the MoE, the NSFAF aims to assist underprivileged students in pursuing their studies at HEIs in Namibia and abroad in order to become productive citizens of the country. The Namibia Students Financial Assistance Act, Act No. 26 of 2000, established the NSFAF by an Act of Parliament. If there is proof that no provision was made for the student's education, orphans are automatically eligible for an NSFAF loan (Kanelombe, 2019).

Students that are eligible for this loan have not been able to repay their debt after the completion of the qualification. The NSFAF has had several issues and presently owes more than N$400 million in student loans. The recipients of these

loans are pressuring the government to turn it into a bursary so that they do not have to repay it (Shidhika, 2020). In 2022, the acting CEO of Namibia Students Financial Assistance Fund, Kennedy, waived interest for a period of 12 months. However, the students are still required to repay their debt (Anon, 2022).

Nigeria Education Tax Fund and the Student's Scholarship Board consolidated into the Education Trust Fund in 2007

The Federal Government of Nigeria established the Tertiary Education Trust Fund (TET FUND) to address the issue of inadequate funding of tertiary institutions, which had been a major source of industrial unrest and disharmony in these institutions (Fejoh & Adesanwo, 2021). The Tertiary Education Trust Fund (TETFund) is a significant source of funding for various Nigerian Federal and State Universities. TETFund is an intervention organisation established to give supplemental support to all levels of public tertiary schools, with the primary goal of using financing in conjunction with project management to restore and consolidate higher education in Nigeria. The major source of funding for TETFund is the 2% education tax paid on the assessable profit of Nigerian enterprises (Faboyede, Faboyede, & Fakile, 2017).

The Education Tax Fund (ETF), established by the Education Tax Act 1993 as a homegrown answer to the various challenges of education, particularly funding, is the result of a 1992 agreement between the Federal Government of Nigeria and ASUU (Faboyede et al., 2017). Although the Education Trust Fund (E.T.F.) was founded to address the myriad issues that face learning in higher institutions, it is also challenged with tremendous issues that threaten its foundation (Adavbiele, 2016). According to Adavbiele (2016), the foundation is facing issues such as fraud, a lack of proper accounting and resource wastage, which are making it difficult for it to play its role in developing Nigerian higher education institutions.

Rwanda Student Financing Agency for Rwanda (SFAR) student loan scheme

The Student Financing Agency for Rwanda (SFAR) was established by law in 2006 after being founded by the government in 2003. The government totally funds the Agency. Its operations were moved to the Rwanda Education Board (REB) in 2011, then to the Development Bank of Rwanda (BRD) in 2015 due to its low loan recovery record. Due to a lack of feasible debt collection tools, loan recovery has been a significant difficulty for the SFAR. It was yet to recoup around US$ 98 million in loans disbursed since the 1990s, as of 2015. Beneficiaries are expected to return their loans at an interest rate of 11% within 15 years after obtaining work (Kossey & Ishengoma, 2017). The Student Financing Agency for Rwanda is in charge of financing higher education (SFAR). This was originally a separate independent organisation, but it is now a part of the newly formed Rwandan Education Board. It finances state universities and administers the Rwandan higher education loan system. Student support eligibility is increasingly means-tested, and the amount of the entitlement is determined by the anticipated unit expenses of the subject in which the student is enrolled (Paxton, 2012).

Several well-wishers and government funds, such as the Student Finance Agency, helped students from disadvantaged and marginalized areas who met all academic standards for public higher education (SFAR). Despite this, access to higher education remains extremely limited in comparison to the requirement for competent graduates to fill employment openings in many areas. To overcome the graduation deficit, the government encouraged private businesses and individuals to invest in higher education (Nshimiyimana & Berndt, 2015).

South Africa National Student Financial Aid Scheme, 1999

Student loans are disbursed in South Africa via the National Student Financial Aid Scheme (NSFAS), which was founded under the NSFAS Act No. 56 of 1999 to absorb the Tertiary Education Fund of South Africa (TEFSA), which had existed since 1991. NSFAS loans are needs-based and subject to

a relative interest rate, with repayment dependant on income (Kossey & Ishengoma, 2017). The National Student Financial Aid Scheme (NFSAS) was formed in 1999 to help eligible students obtain entrance to public higher education institutions by granting loans and bursaries. The following are eligible to get NSFAS:

· Those whose household income is less than the lowest level, as determined by the current South African Revenue System tax tables;
· Those who attended a Quintile 1 school, which comprises those who are exempt from paying school fees in public schools; and
· Those from disadvantaged municipalities (Sader & Gabela, 2017).

NSFAS supported access to HE for a wide, diversified set of beneficiaries between 2005 and 2015, with a focus on African and female recipients (Mabuza, 2020). People obtained financing from NSFAS for an average of 3 to 6 years, with a far lower fraction obtaining awards for longer durations. Most awards (90%) were loans and based on the rising trend of 100% conversion loan awards, the academic performance of NSFAS-funded students has been improving. Yet, the total graduation percentage of 46% remains fairly low (Wildschut et al., 2018). According to research conducted by Sokhweba, Obokoh, Abiola, and Oji (2021), the scheme has provided funding for students with access to tertiary education. Nonetheless, there are several difficulties that impede students' seamless access to the money that policy-makers must solve.

Swaziland Loan component of scholarship under the Scholarship Secretariat of the Ministry of Education

This scholarship plan is administered by the Ministry of Education's scholarship division and is offered to students in the form of loans for the duration of their education. Following completion of studies and employment, 50% of the total amount obtained from the government is repayable at 5% simple interest for a period ranging from four to eight years.

This means that in Swaziland, while the government continues to devote the majority of resources to higher education, households/parents pay heavily to the education system at the lower levels (Akinkugbe, 2000).

Tanzania HESLB

Tanzania's Higher Education Students' Loans Board (HESLB) was created by Act No. 9 of 2004 to oversee government student loans. It was introduced in July 2005, replacing an older scheme that was established in 1994. Its two main goals are to aid financially needy students who gain admission to approved higher education institutions both within and outside the country, and to recoup all loans disbursed since 1994. The foundation of the HESLB is also consistent with the 1999 National Higher Education Policy, which stated, amongst other things, that cost-sharing was required in order to successfully support higher education in Tanzania (Kossey & Ishengoma, 2017). The HESLB is primarily responsible for the administration of student loans for higher education in the country (Puja, 2009). HESLB's primary duty was to make loans available to students and to reclaim loans from previously supported students to fund the new cohort (Ngowi, 2013).

Tanzania's government worked hard to boost the number of loan recipients to 124711 in 2016/2017. However, it has been struck a huge blow by a significant increase in the number of people missing out on state education financing, the worst instance in the last five years. At the same time, the number of students requesting loans has steadily surpassed the Tanzania Universities Commission's (TCU) yearly admission estimates (Nyoni, 2018). According to Memba and Feng (2016), the HESLB's budget has continued to grow despite massive deficits, according to the results. On the one hand, this may be perceived as undermining the fund's laudable objective of giving loans to poor students desiring to pursue higher education in Tanzania and abroad, but also impacts its role in the country's growth through the production of much needed human capital.

2.1.2   International scholarships

Africa London Nagasaki (ALN) fund

The Africa London Nagasaki (ALN) Initiative is a scholarship fund established to assist African scientists in pursuing a master's degree in a field related to infectious disease control in Africa. The grants help candidates pursue a Master of Tropical Medicine degree at Nagasaki University's School of Tropical Medicine and Global Health, or an MSc at the London School of Hygiene and Tropical Medicine in London, UK. For the years 2010 to 2019, four or five prizes will be given each year. Each successful applicant will receive a maximum of $50,000 in tuition, travel and living expenses (ANL, 2019; Watts, 2017).

This initiative has been quite successful, with 500-1000 applications submitted each year for 4-5 awards. The ALN scheme fully supported 31 students to pursue a master's degree, 29 of them graduated successfully, one student is still pursuing her studies via distance learning, and one failed. Regrettably, 2019 was expected to be the last year in which awards could be granted because, despite a generous contribution from Sysmex, sufficient resources have yet to be raised to prolong the programmeem (Greenwood, 2019).

Aga Khan Foundation scholarship

This scholarship is awarded to a limited number of outstanding postgraduate students each year from select developing countries who have no other means of financing their studies. The primary goal of this funding is developing effective scholars and leaders and preparing them for employment, primarily within the AKDN (Foundation, 2020). The grant is distributed on a 50/50 basis through a competitive application process once a year in June or July. The Foundation prioritizes requests for Master's level courses, but is willing to accept applications for PhD programmes only in the event of outstanding students who have been strongly recommended for doctoral study by their teachers and who require a PhD

to achieve their career goals (academic or research oriented) (Sood, 2022).

Commonwealth Distance Learning scholarship

Since 2002, the Imperial College London Distance Learning Programme (DLP) has received over 100 Commonwealth Scholarship Commission grants for postgraduate master's level courses given via distance learning. The scholarships were given to students from the Southern African Development Community (SADC) and Ghana (Gregson, 2006). Commonwealth Distance Learning Scholarships are available to candidates from the Commonwealth's least developed, low-income, and lower-middle-income nations for part-time Master's study via distance learning on chosen programmes offered by UK universities. The Foreign, Commonwealth and Development Office funds these scholarships and contribute to Commonwealth countries' development requirements by offering training for experienced and qualified personnel in important development sectors. High-quality postgraduate students who want to obtain training that is not accessible in their home countries, who want or need to stay in their home country while studying, and who have the potential to help their home countries develop with the knowledge and leadership skills they gain, are eligible (Commission, 2022).

The Beit Trust Scholarship

The Beit Trust was formed through the will of Alfred Beit, a financier and philanthropist, in 1906. Each year, up to twenty Beit Scholarships are awarded, which are supported in collaboration with partner universities such as Cambridge. They are open to Zambian, Zimbabwean and Malawian nationals who are also permanent residents in their respective countries (and to those nationals only). Beit Trust Scholarships are exclusively available for postgraduate studies. They do not offer undergraduate scholarships, and the postgraduate focus is on Master's degrees (T. B. Trust, 2021).

Rhodes scholarship

The Rhodes Scholarship is the oldest (first awarded in 1902) and probably most internationally recognized scholarship programme, allowing brilliant young people from all over the globe to study at the University of Oxford (T. R. Trust, 2020). The scholarship is now open to applicants from all backgrounds and genders around the world. The scholarship grant covers study-related expenditures and gives a stipend for two to three years in order to pursue any postgraduate programme offered at Oxford. Around 20% of Rhodes scholars are black, with half of them being black indigenous or people of colour. This is consistent with Oxford's goal of diversifying its postgraduate population, notably its Black student population. By 2020, 19 African students will be selected each year to receive a scholarship stipend, with the goal of expanding this number to 32 (Wikipedia, 2022).

Fulbright Foreign Student Programme

The Fulbright Programme was founded in 1946 as a result of Senator J. William Fulbright's efforts to promote academic and cultural contacts between the United States and the rest of the globe (Bashir, 2012). The South African Fulbright Foreign Student Programme gives funding to South African university graduates to pursue postgraduate study in any topic at a university in the United States (excludes MBA and studies that require contact with patients). Students are chosen following a rigorous application and interview process and are provided with extensive support, including visa processing and health insurance, as well as a complete pre-departure orientation and re-entry session (Cottrell, 2012).

2.2 *Exchange programmes*

2.2.1 *Mandela Washington Fellowship for young African leaders (YALI)*

This fellowship is the flagship programme of the Young African Leaders Initiative (YALI), a non-profit organisation that develops young people via academic courses, leadership

training and networking opportunities (Watters, Smith, Flores, Clowser, & Cissé). The Fellowship provides up to 700 outstanding young leaders from Sub-Saharan Africa with the chance to perfect their abilities at a U.S. higher education institution, as well as professional development support once they return home. Institutes concentrate on leadership and skills development in one of three areas: business, civic engagement, or public administration. After completing a 6-week programme in a U.S. college or university, up to 70 Mandela Washington Fellows will be able to participate in a 4-week Professional Development Experience with a U.S. business, civil society group or government agency (Becker, 2017).

Since its inception in 2014, the Mandela Washington Fellowship has sent almost 5800 young leaders from every Sub-Saharan African country to the United States for academic and leadership development. The Fellows are successful visionaries and pioneers in their communities and nations, ranging in age from 25 to 35 (Fellowship, 2023).

2.2.2 *Global Undergraduate Exchange Programme*

The Global Undergraduate Exchange Programme is a full-tuition scholarship for one semester of non-degree academic study at an allocated institution or university in the United States. Participants are emerging leaders who care about their communities. Throughout the programme, Global UGRAD participants are challenged to investigate US society, culture and academic learning. They also volunteer in the community and work to improve their professional abilities. All participants will be enrolled in full-time, non-degree, undergraduate courses from their host institution's existing curriculum. The scholarship allows students to learn about US society, culture and learning methods. Participants have the opportunity to live with American residents whilst simultaneously participating in activities that promote the well-being of the individual. The African countries participating in this programme are as follows: Algeria,

Egypt, Ethiopia, Kenya, Mauritania, Niger and Zimbabwe (U.S. Embassy, 2015).

2.2.3 *The Tübingen-South Africa Programme*

This is a cultural and language exchange programme that offers South African students the chance to be exposed to the German culture and language. It also aims to bring about closer ties and understanding between South Africa and Germany (International, 2019).

2.3 **Research partnership**

2.3.1 *North-South Research Relationships in Higher Education: The Irish African Partnership Model*

Partnerships are intended to assist South African HEIs in addressing issues such as brain drain, a lack of academic personnel with Doctor of Philosophy (PhD) degrees, unsuitable curricula, and bad infrastructure, to name a few. International relationships can assist HEIs when they are aimed at finding solutions to such difficulties. Institutions, on the other hand, face significant challenges in managing collaborations, particularly in the North-South environment (Chasi, 2019). The Irish African Partnership for Research Capacity Building, a programme reinforced by Irish Aid and Universities Ireland, brings together all nine academic institutions on the island of Ireland in collaboration with four universities in Malawi, Mozambique, Tanzania and Uganda to develop a coordinated thirteen partner universities. They demonstrate the possible shared benefits from partnerships in Higher Education that emphasise capacity building in both the North and South (Nakabugo, Barrett, McEvoy, & Munck, 2010). The initiative's fundamental objective is to collectively build research capacity in support of the international development goal of alleviating poverty (and related concerns such as sustainable livelihood, environmental conservation, and catastrophe risk reduction), especially in Sub-Saharan Africa. Three overarching goals were decided upon from the start under this broad ethos:

- To increase capacity in development research at nine Irish universities;
- Strengthening research capacity at four African partner universities in health, education, gender, and ICT; and
- Creating a long-term Irish-African network of expertise in development research (E. B. M. G. Nakabugo et al., 2010).

2.3.2 African-US higher education initiative

In 2007 mid-year, numerous organisations from the US and Africa convened to discuss what could be done to help boost African higher education's capacity to teach and address challenges related to national and regional development. These meetings culminated in an attempt to increase the capability of African higher education through long-term cooperation between African and American higher education institutions (Owoeye, 2021). According to participants at the annual Association of International Education Administrators meeting in San Francisco, a number of ambitious US-led projects are helping to revitalize African higher education. They attempt to enhance and expand African universities through relationships with US schools, and are largely funded by the US government (Banya, 2010).

2.3.3 Canada-Africa higher education

Canada's universities are collaborating with members of the Association of African Universities on an initiative to strengthen relationships between higher education and the corporate sector. The Association of Universities and Colleges of Canada has initiated an initiative to establish 27 new university-industry collaborations, with Canadian and African researchers working on projects targeted at integrating the chosen African university into a local or regional industry. The Association of African Universities (AAU) has launched "Strengthening Higher Education Stakeholder Relations in Africa" in collaboration with the (AUCC) (Fine, 2010). The three components of this plan are as follows:

- Strengthening African University Outreach,

- University-Industry Linkages, and
- AAU Stakeholder Relations in Collaboration with AUCC (Fine, 2010).

2.3.4 *Southern Africa-Nordic Partnership (SANORD) in Higher education*

SANORD is a collaboration of 25 research-led higher education institutions from Denmark, Finland, Iceland, Norway and Sweden, as well as universities from Malawi, South Africa and Zambia. SANORD's mission is to enhance international academic partnership between institutions in the Nordic nations and Southern African areas in order to address innovation and development concerns (Teferra, 2011). SANORD, as a network of academic institutions, plays a vital role in addressing the difficulties of academic freedom and knowledge decolonization. It is important to develop awareness about knowledge that is not influenced by political or commercial interests, and to foster an environment in which the SDGs can be addressed openly, critically and creatively (Halvorsen, Evans, & Penderis, 2017).

2.3.5 *The Academic Exchange Service of Germany (DAAD)*

For over two decades, DAAD has played a prominent role in African university cooperation. Currently, there are approximately 35 duos with one or more African partners. Furthermore, five new African centres of excellence and five new international centres of excellence with African university participation are being supported. A new cooperation model enables the DAAD and the German University Union to work together to develop quality-assurance systems with university administrations and higher education authorities (Austauschdienst, 2015; Grothus, 2003).

2.3.6 *The African Academic Diaspora*

The African Institute of Mathematical Sciences (AIMS) Research Chair programme aims to help excellent African graduates with more than two years of postdoctoral research

experience who are based outside of Africa establish themselves firmly in Africa while pursuing international-class research. AIMS has hired eight African diaspora research chairs based in Europe and North America for four- to five-year terms amongst its six centres in Cameroon, Ghana, Rwanda, Senegal, South Africa and Tanzania, with plans to hire an additional five in 2018 (P. T. Zeleza & Foulds, 2014). AIMS, which was created in 2003 and is located in Kigali, Rwanda, selects bright university graduates and provides them with cutting-edge mathematics training that allows them to enter technical occupations or pursue graduate studies in technical disciplines (Ogachi, 2015).

2.3.7 *Fulbright South African Research Scholar Programme*

The Fulbright South African Research Scholar Programme (SARSP) provides South African university professors or research institute personnel with the chance to do research in their field of expertise in a U.S. academic or research institution for 3 to 9 months. A research grant allows the scholar to do high-level research in a U.S. educational institution in order to develop academic programmes or curricula at his or her home university (U. S. Embassy, 2022).

3.   The role of these collaborations in higher education in Africa

Each year, national governments, supranational entities, huge charity foundations, higher education institutions, and many smaller organisations contribute significantly to international scholarship programmes for higher education (Mawer, 2017). Historically, specific South African academic institutions have been characterized as either teaching-oriented or research-oriented. The government has sought to promote a more balanced interpretation of scholarship at both former research universities and teaching universities by encouraging a diverse staff and student population, emphasizing service learning in and with the community in which the institution is located,

and emphasizing the link between equity and quality (Chetty & Lubben, 2010).

The demand for some form of government-sponsored student loan programme is a need that is acknowledged in most nations, even if only carried out successfully by a few. This follows from the cost-sharing approach and strategy. Lending can, at the very least, offer a significant amount of money to finance higher education, thereby contributing a 'third leg' to cost-sharing and complementing revenue from parents and taxpayers (Johnstone, 2005). Student loans, from an economic standpoint, present an alternate solution to the financial limitations that students face. They provide a route for students from low socio-economic backgrounds who would otherwise be denied entry to higher education due to their inability to pay (Atuahene, 2008). There have been no concrete arguments about what type of loan system is practical in Africa because those that have existed have only been experimented with, with limited recovery. It would be counterproductive to increase loan-fuelled demand for higher education with graduates who are unable to find work (Oketch, 2016).

Sponsoring students through taxes is no longer a practical and sustainable solution, particularly in a society of conflicting needs from many industries and an ever-expanding student population seeking higher education. Government funds cannot support free higher education in Africa, and funding for bursary programmes has placed a significant burden on educational institutions (Masaiti, Mwelwa, & Mwale, 2016). Due to a lack of investigation, most students are unaware of bursaries for higher education before enrolling in university. There are several bursary options on the African continent that will give financial support to African youth to pursue a post-secondary diploma and will not demand repayment after graduation (Siebritz, 2023).

International scholarships are one of the possibilities with a long and successful history of increasing opportunity, intellectual capacities and international awareness—attributes that are more vital than ever in the twenty-first

century (Marsh, 2018). It is critical to recognize the importance of international education. For decades, institutions such as LSE have provided opportunities for African students to study abroad. This is not without complications, particularly when one considers the colonial connection that some Western institutions have had with the African continent (De Wit, Hunter, Howard, & Egron-Polak, 2015a).

Over the years, engagements with Western countries have been the main component of research and development in Africa's higher education. Africa is one of the world's larger continents, and its higher education has been linked to the Western system since the 18th century through the colonial ties formed. Firstly, Africa represents a developing political economy. Secondly, Africa is a periphery in the centre-periphery dichotomy of higher education, and thirdly, Africa regards the internationalisation partnership as unbalanced (Alemu, 2014). Research cooperation between African higher education institutions and those in developed regions are the most fruitful framework for reinvigorating and improving research capabilities (Molosi-France & Makoni, 2020). International collaborations have been critical in driving higher education research performance for Africa over the years. Furthermore, African higher education institutions have had substantial research connections with universities in Europe and North America for over a century (Eduan & Yuanqun, 2019).

To conclude this chapter, it can be highlighted that most African countries are providing the students with finance to access higher education through student loans and scholarships. However, there are still challenges that hinder their progress. These include (but are not limited to) fraud, mismanagement of funds and the inability of students to repay these loans. Over the past years, students have been fighting for fees to fall and asking the government to convert these loans into bursaries. In South Africa, the initiative was successful because since 2018, NSFAS has been providing students with bursaries. Other countries still have a long way to go and struggle to collect these loans from students

after graduation. It is recommended that the governments of these countries encourage private companies to invest in public education.

References

Abdulrahman, M. M. (2020). Higher Education Loans Board in Kenya from the Islamic Sharia Perspective. *International Journal of Islamic Thought*, *18*, 34-42. https://doi.org/10.24035/ijit.18.2020.179

Adavbiele, J. (2016). Impact of education trust fund (ETF) on tertiary institutions in Nigeria, using college of education, as case study. *IOSR Journal of Research Method in Education*, *6*(3), 18-25.

Akinkugbe, O. (2000). Higher education financing and equality of educational opportunities in Swaziland. *International Journal of Social Economics*. https://doi.org/10.1108/03068290010352461

Alemu, S. K. (2014). An appraisal of the internationalisation of higher education in sub-Saharan Africa. *CEPS journal*, *4*(2), 71-90. https://doi.org/10.26529/cepsj.205

Altbach, P. G., & Knight, J. (2007). The internationalisation of higher education: Motivations and realities. *Journal of studies in international education*, *11*(3-4), 290-305. https://doi.org/10.1177/1028315307303542

ANL. (2019). *Africa London Nagasaki scholarship fund.* Retrieved 08 March 2023 from https://www.alnscholarshipfund.org/

Anon. (2022). NSFAF waives interest, debt remains payable. *New Era Live.* https://neweralive.na/posts/nsfaf-waives-interest-debt-remains-payable

Atuahene, F. (2008). The challenge of financing higher education and the role of student loans scheme: an analysis of the student loan trust fund (SLTF) in Ghana. *Higher Education 56*, 407-421. https://doi.org/10.1007/s10734-007-9101-5

Austauschdienst, D. A. (2015). German Academic Exchange Service. *nd). Courses of study in Germany. www. daad. de/ deutschland/studienangebote/en.*

Bank, W. (2017). International development association project appraisal document on a proposed grant in the amount of sdr 3.8 million (US $5 million equivalent) to the Republic of Haiti for a statistical capacity building project. In: The World Bank.

Banya, K. (2010). The dilemma of universalizing higher education true partnerships: some reflections. *Education and Society*, *28*(2), 5-27. https://doi.org/10.7459/es/28.2.02

Bashir, M. (2012). Fulbright programme for foreign students and the study of public administration. *Journal of Public Affairs Education*, *18*(1), 229-237. https://doi.org/10.1080/152368 03.2012.12001679

Becker, C. (2017). Mandela Washington Fellows Visit Mershon.

Chasi, S. (2019). *North-South partnerships in public higher education: A selected South African case study* University of the Witwatersrand, Faculty of Humanities, School of Education].

Chetty, R., & Lubben, F. (2010). The scholarship of research in teacher education in a higher education institution in transition: Issues of identity. *Teaching and teacher education*, *26*(4), 813-820. https://doi.org/10.1016/j. tate.2009.10.018

Commission, C. S. (2022). *COMMONWEALTH DISTANCE LEARNING SCHOLARSHIPS – CANDIDATES 2022*. Retrieved 18 March from https://cscuk.fcdo.gov.uk/scholarships/ commonwealth-distance-learning-scholarships-candidates-2022/

Cottrell, R. R. (2012). Fulbright programmes: an opportunity for career development. *Health promotion practice*, *13*(1), 14-17. https://doi.org/10.1177/1524839911432007

Dary, S. K., & James, H. S. (2018). Financing higher education through student loans: an examination of student loan take up and the debt burden among Ghanaian tertiary students. *International Journal of African Higher Education*, *5*(1). https://doi.org/10.6017/ijahe.v5i1.10960

De Wit, H., Hunter, F., Howard, L., & Egron-Polak, E. (2015). Internationalisation of higher education. In: Paris.

Dunga, S. H. (2013). Financing higher education in Malawi: Prospects, challenges and opportunities. In *Funding higher education in sub-Saharan Africa* (pp. 184-213). Springer. https://doi.org/10.1057/9781137345783_8

Eduan, W., & Yuanqun, J. (2019). Patterns of the China-Africa research collaborations from 2006 to 2016: a bibliometric analysis. *Higher education*, 77(6), 979-994. https://doi.org/10.1007/s10734-018-0314-6

Embassy, U. (2015). The American Consulate General in Jerusalem Announces The FY 2015 Global Undergraduate Student Exchange Programme (Global UGRAD).

Embassy, U. S. (2022). *Fulbright South African Research Scholar Programme*. Retrieved 25 February from https://za.usembassy.gov/education-culture/fulbright-postdoctoral/

Experton, W., & Fevre, C. (2010). Financing higher education in Africa. *World Bank: Washington.[Retrieved from]*.

Faboyede, O. S., Faboyede, A., & Fakile, A. (2017). Funding of university education in Nigeria: challenges and prospects. *European Journal of Social Sciences Studies*, 2(1), 221-238.

Fejoh, J., & Adesanwo, E. (2021). Impact of Tertiary Education Trust Fund (Tetfund). *Published Since 1957*, 120. https://doi.org/10.36997/IJUEV2021.65.1.120

Fellowship, M. W. (2023). *Fellowship Overview*. https://www.mandelawashingtonfellowship.org/#:~:text=Established%20in%202014%2C%20the%20Mandela,in%20their%20communities%20and%20countries.

Fine, P. (2010). CANADA-AFRICA: New project links universities to industry. *University World News.* https://www.universityworldnews.com/post. php?story=20100605065051985

Foundation, A. K. (2020). *International Scholarship Programme.* Retrieved 15 March from https://www.akdn.org/ our-agencies/aga-khan-foundation/international- scholarship-programme

Fourie, J., & Neale-Shutte, M. (2006). Challenges to internationalisation in African higher education: A case study. *South African Journal of Higher Education*, *20*, 118- 142. https://doi.org/10.4314/sajhe.v20i1.25562

Greenwood, B. (2019). *Updates on activities of Dr. Brian Greenwood (The Laureate of the First Hideyo Noguchi Africa Prize for Medical Research)*. Retrieved 08 March 2023 from https:// www.cao.go.jp/noguchisho/english/award/01/message_ briangreenwood2019.html

Gregson, J. (2006). Promoting access to post graduate distance education and development impact through collaboration, scholarships and appropriate use of technology in Africa.

Grothus, U. (2003). The contribution of international academic co-operation and exchange to the development and advancement of society. *Higher Education in Europe*, *28*(1), 109-111. https://doi.org/10.1080/0379772032000110224

Hagenmeier, C. (2015). Ensuring equality in higher education partnerships involving unequal universities in divergent contexts. *International Higher Education*(83), 9-10. https:// doi.org/10.6017/ihe.2015.83.9077

Halvorsen, T., Evans, H.-C., & Penderis, S. (2017). *Knowledge for justice: critical perspectives from Southern African- Nordic research partnerships*. African Minds. https://doi. org/10.47622/9781928331636

HELB. (2020). *The 2020/2021 HELB Sustainability Report.* https://
www.helb.co.ke/wp-content/uploads/2021/11/HELB-
Sustainability-Report.pdf

International, S. U. (2019). *Tubingen-South Africa Programme.*
Retrieved 25 March from https://www0.sun.ac.za/
international/current-students/international-
opportunities-for-su-students/tbingen-South-
africa-programme.html#:~:text=The%20
T%C3%BCbingen%2DSouth%20Africa%20
Programme%20is%20a%20cultural%20and%20
language,between%20South%20Africa%20and%20
Germany.

Johnstone, D. B. (2005). Higher educational accessibility and
financial viability: The role of student loans. World Report
on Higher Education: The Financing of Universities II
International Barcelona Conference on Higher Education,
Global University Network for Innovation (GUNI)
Barcelona, Spain, May,

Johnstone, D. B. (2015). Making student loans work in Africa.
International Journal of African Higher Education, 2. https://
doi.org/10.6017/ijahe.v2i1.9256

Jowi, J. O. (2012). African universities in the global knowledge
economy: the good and ugly of internationalisation.
Journal of Marketing for Higher Education, 22(1), 153–165.
https://doi.org/10.1080/08841241.2012.705799

Kanelombe, J. F. (2019). *The effectiveness of the Namibia Student
Financial Assistance Fund in recovering loans* University of
Namibia].

Kaulinge, V. H. (2011). *Analysing the efficacy of the Namibia's
student financial assistance fund* Stellenbosch: Stellenbosch
University].

Kossey, M. M., & Ishengoma, J. M. (2017). Issues and challenges of
student financing systems in Africa: The case of Tanzania.
International Journal of African Higher Education, 4(1).
https://doi.org/10.6017/ijahe.v4i1.10250

Kwaramba, M., & Mukanjari, S. (2013). The Quest for Gender Equity Through Internationalisation Strategies at Higher Education Institutions in the Western Cape, South Africa. In *Internationalisation of African Higher Education* (pp. 53-72). https://doi.org/10.1007/978-94-6209-311-9_4

Leader, T., Weeks, S., & Leader, D. T. (2009). Consultancy Services for the Review of the Grant/Loan Sponsorship Scheme of the Department of Student Placement and Welfare, Ministry of Education, Republic of Botswana.

Mabuza, N. H. (2020). Dropout causes of students funded by the national student financial aid scheme in South African universities. In: Doctoral Thesis, University of South Africa, Pretoria.

Marcucci, P. N., & Johnstone, D. B. (2007). Tuition fee policies in a comparative perspective: Theoretical and political rationales. *Journal of Higher education policy and Management*, 29(1), 25-40. https://doi.org/10.1080/13600800600980015

Marsh, R. (2018). Can international scholarships lead to social change? *University World News.* https://www.universityworldnews.com/post.php?story=20180130135416862

Masaiti, G., Mwelwa, K., & Mwale, N. (2016). Shifting from government bursaries to a loan scheme in higher education: Exploring the Zambian experience in student financial Aid. https://doi.org/10.6017/ijahe.v2i1.9260

Mashininga, K., & Ndovi, J. (2011). MALAWI: Student discontent over strict new loan terms. *University World News: African Edition*. https://www.universityworldnews.com/post.php?story=20110128230030794

Mawer, M. (2017). Approaches to analyzing the outcomes of international scholarship programmes for higher education. *Journal of Studies in International Education*, 21(3), 230-245. https://doi.org/10.1177/1028315316687009

Memba, A. Z., & Feng, Z. Z. (2016). Performance of the Higher Education Students Loans Board in Human Capital Investment from 2005-2015. *Higher Education Studies*, *6*(3), 48-60. https://doi.org/10.5539/hes.v6n3p48

Molosi-France, K., & Makoni, S. (2020). A partnership of un-equals: global South–North research collaborations in higher education institutions. *Modern Africa: Politics, History and Society*, *8*(2), 9-24. https://doi.org/10.26806/modafr.v8i2.343

Morris, I. D. (2015). *Is there a role for Botswana Government Technical Colleges within a tertiary education and training market?* University of Bath].

Nakabugo, E. B. M. G., Barrett, E., Conway, P., McEvoy, P., Farren, S., & Nakabugo, M. G. (2010). Development-related Research Capacity in Irish and African Higher Education Institutions: Findings from a Stakeholder Consultation.

Nakabugo, M., Barrett, E., McEvoy, P., & Munck, R. (2010). Best practice in North-South research relationships in higher education: The Irish African partnership model. *Policy & Practice: A Development Education Review*, *10*(Spring), 89-98.

Nchaka, M. (2009). *The Lesotho National Manpower Development Secretariat in the stakeholder century: an intergrated marketing communication approach* University of the Free State].

Ngowi, D. P. (2013). *Management of provision and recovery of loans To the Tanzanians' students of higher learning Institutions: A case of higher education Students loan board (HESLB)* Mzumbe University].

Nkisi, M. (2021). Higher education financing in lesotho: regulation to realize its sustainability and increase inclusiveness. *Journal of African Law*, *65*(1), 25-45. https://doi.org/10.1017/S0021855320000327

Nshimiyimana, S., & Berndt, A. (2015). Student Satisfaction: the Case of Rwandan Higher Learning Institutions. 1st Annual Eastern Africa Business and Economic Watch Conference, Finance and Management Research in Eastern Africa Kigali, Rwanda. 5-7 May 2015,

Nyoni, W. P. (2018). The Impact of Higher Education Loan System among Students from Low-Income Background in Tanzania. *European Scientific Journal*, *14*, 28. https://doi.org/10.19044/esj.2018.v14n28p39

Odebero, S. O., Bosire, J. N., Sang, A. K., Ngala, F. B., & Ngware, M. W. (2007). Equity in the distribution of HELB loans in Kenya in relation to students characteristics: an empirical analysis. *Educational Research and Reviews*, 2(8), 209-219.

Oduro-Mensah, D., & Biney, I. K. (2014). Strengthening Lifelong Education For Development: The Case of Ghana.

Ogachi, I. O. (2015). Engaging the African Academic Diaspora: How Ready Are Universities in Africa? *International Journal of African Higher Education*, 2. https://doi.org/10.6017/ijahe.v2i1.9263

Oketch, M. (2016). Financing higher education in sub-Saharan Africa: some reflections and implications for sustainable development. *Higher Education*, 72, 525-539. https://doi.org/10.1007/s10734-016-0044-6

Onang'o, O. T., & Orodho, J. A. (2016). Effects of level of adequacy of higher education loans on participation rates of students in distance degree programmes at Kenyatta University, Kenya. *Research on Humanities Social Sciences*, *6*(8), 66-73.

Owoeye, T. (2021). Africa–US Relations: The Politics of Trade, Investment and Security. In *The Governance, Security and Development Nexus* (pp. 77-96). Springer. https://doi.org/10.1007/978-3-030-49348-6_4

Owusu-Antoh, R. (2019). *An Analysis of Loan Repayment Behaviour among Students Loan Borrowers in Ghana* University of Ghana].

Oyewole, O. (2009). Internationalisation and its implications for the quality of higher education in Africa. *Higher Education Policy*, 22(3), 319-329. https://doi.org/10.1057/hep.2009.10

Paxton, W. (2012). The Rwandan education and skills system. Kigali: Institute of Policy Analysis and Research-Rwanda

Pillay, P. (2010). *Higher education financing in East and Southern Africa.* African Minds.

Puja, G. (2009). Cost-sharing in higher education in Tanzania: The experiences of the 1990s and one decade later. *Comparative and International Education*, *38*(1). https://doi.org/10.5206/cie-eci.v38i1.9128

Ross, K. R. (2018). *Malawi and Scotland for Sustainable Development.* Edinburgh: Scotland Malawi Partnership

Rumbley, L. E., Altbach, P. G., & Reisberg, L. (2012). Internationalisation within the higher education context. *The SAGE handbook of international higher education*, *3*, 26. https://doi.org/10.4135/9781452218397.n1

Sader, S., & Gabela, N. (2017). Spatialities of widening participation: Narratives of first year students receiving financial aid. *South African Journal of Higher Education*, *31*(1), 227-242. https://doi.org/10.20853/31-1-1056

Semali, L. M., Baker, R., & Freer, R. (2013). Multi-Institutional Partnerships for Higher Education in Africa: A Case Study of Assumptions of International Academic Collaboration. *International Journal of Higher Education*, 2(2), 53-66. https://doi.org/10.5430/ijhe.v2n2p53

Shawa, L. B. (2014). The quest for a quality delivery of university education in Malawi. *Mediterranean Journal of Social Sciences*, 5(20), 1176-1176. https://doi.org/10.5901/mjss.2014.v5n20p1176

Shidhika, J. K. (2020). *An exploratory study on the factors affecting repayment of Namibia Students Financial Assistance Fund (NSFAF) loans* University of Namibia].

Siebritz, G. (2023). *Why Higher Education Bursaries go Unnoticed* https://www.careersportal.co.za/news/why-higher-education-bursaries-go-unnoticed

Sokhweba, X., Obokoh, L., Abiola, B., & Oji, C. C. (2021). The Effect of National Student Financial Aid Scheme on Student's Access to Tertiary Education in a Selected University in The Western Cape. Reshaping Sustainable Development Goals Implementation in the World: Proceeding of 7th International Conference on Business and Management Dynamics. https://doi.org/10.9734/bpi/mono/978-93-5547-236-6/CH15

Some, T. H. (2010). In Search of Sources other than governmental in the financing of higher education in Sub-Saharan Africa: A Word of caution beyond the gains. *Journal of Higher Education in Africa/Revue de l'enseignement supérieur en Afrique*, *8*(1), 73-98.

Sood, S. (2022, 15 March). Aga khan Foundation Scholarships. *Collegedunia.* https://collegedunia.com/scholarship/238-aga-khan-foundation-scholarships

Teferra, D. (2011). Partnerships in Africa in the new era of internationalisation. *International Higher Education*(65).

Teferra, D., & Altbachl, P. G. (2004). African higher education: Challenges for the 21st century. *Higher education*, *47*(1), 21-50. https://doi.org/10.1023/B:HIGH.0000009822.49980.30

Telecom. (2020). *Burkina Faso's govt officially launches its "One student, one computer" programme.* https://www.ecofinagency.com/telecom/0605-41327-burkina-faso-s-govt-officially-launches-its-one-student-one-computer-programme

Tlali, S. B., & Hapazari, I. (2018). *Financing Higher Education In Lesotho and a Selection of other SADC Countries* https://www.che.ac.ls/wp-content/uploads/2018/12/Prof_Tlali_Conference_Paper.pdf

Trust, T. B. (2021). *Beit Trust Postgraduate Scholarships*. Retrieved 25 March from https://beittrust.org.uk/beit-trust-scholarships/

Trust, T. R. (2020). *The Rhodes Scholarship.* Retrieved 28 February from https://www.rhodeshouse.ox.ac.uk/scholarships/the-rhodes-scholarship/

Van Lill, M., & Gaillard, J. (2014). Science granting councils in Sub-Saharan Africa. Country report: Burkina Faso.

Watters, C. E., Smith, A. J., Flores, L. A., Clowser, M. R., & Cissé, M. M. Planning and Delivering a Mandela Washington Fellowship Institute for Entrepreneurs from Sub-Saharan Africa: Oklahoma State University's Experience.

Watts, G. (2017). Scholarship fund for young African scientists facing demise. *The Lancet*, *389*(10073), 997. https://doi.org/10.1016/S0140-6736(17)30697-9

Wikipedia. (2022). Rhodes Scholarship. In *The free encyclopedia.*

Wildschut, A., Mncwango, B., Rogan, M., Rust, J., Fongwa, S., & Meiring, L. (2018). The National Student Financial Aid Scheme (NSFAS) and its impact: Exploring the absorption into employment of NSFAS-funded graduates.

Woodhall, M. (1992). Student loans in developing countries: feasibility, experience and prospects for reform. *Higher Education*, *23*(4), 347-356. https://doi.org/10.1007/BF00138623

Yizengaw, T. (2007). Implementation of cost sharing in the Ethiopian higher education landscape: critical assessment and the way forward. *Higher Education Quarterly*, *61*(2), 171-196. https://doi.org/10.1111/j.1468-2273.2007.00345.x

Zeleza, P. T., & Foulds, K. (2014). The African academic diaspora and African higher education.

Zolfaghari, A., Sabran, M. S., & Zolfaghari, A. (2009). Internationalisation of higher education: challenges, strategies, policies and programmes. *Online Submission*, *6*(5), 1-9.

Chapter 4

Migration of Zimbabwean Scholars in the SADC Region in the 21st Century

Thulani Andrew Chauke 🆔
University of South Africa

Rachel Chinyakata 🆔
University of Western Cape

Abstract

Before Zimbabwe gained its independence, the Zimbabwean higher education system was considered one of the best on the continent. The higher education system of Zimbabwe has produced large numbers of scholars with skills in the STEM (science, technology, engineering, and mathematics) subjects compared to countries such as South Africa and Botswana in the SADC region. The SADC region has witnessed a significant movement of Zimbabweans mainly to South Africa and Botswana during the 21st Century which has played an enormous role in the promotion of the internationalisation of higher education in the SADC region. Although there is much data on the migration of Zimbabweans to other countries, there is only a limited amount data that specifically focuses on the movement of scholars. Therefore, this chapter seeks to address this scarcity in research by providing an understanding of the push and pull factors that contribute to the massive movement of Zimbabwean scholars to other countries within the Southern African Development Community region with a special focus on South Africa and Botswana. The chapter also look at the impact of the movement on both the sending

country and receiving countries. Literature sources were used as the main source of the data for this chapter. The movement of Zimbabwean scholars to the Southern African Development Community region can play a vital role in the attainment of Africanisation and Internationalisation in the SADC region. Therefore, such movement should be managed effectively in order for both the countries of origin and of destination to realise the benefits of migration.

1.   Introduction

Several scholars from the Southern African Development Community region (SADC) had left their countries over the past several years to go and study at the higher education institutions in South Africa. Chimonyo (2019) stated that not only is the country geographically close to most Southern African countries, but its universities also use mainly English as a medium of instruction while being recognized internationally. This attracts many scholars both locally and internationally. This has contributed to the innovation of the higher education sector in South Africa by prioritizing infrastructure development to accommodate migrant scholars in setting up new offices for international scholars (Chasi, 2019). The internationalisation of higher education in South Africa has become a national debate, where the bodies representing the higher education sector call on the government to come up with a policy that will support the internationalisation of higher education (International Education Association of South Africa (IEASA), 2020). In order to move the education sector to the global stage, the government must put the internationalisation of higher education on its policy agenda (DHET, 2019). The internationalisation of higher education can be defined as a process where international experience is amalgamated to the local setting with the aim of enhancing the quality of teaching and learning at the institution of higher education (De Wit, Hunter, Howard and Egron-Polak, 2015). The University of the Free State showed its commitment to the internationalisation of higher education by collaborating with scholars from other

universities in African and European universities and co-authored 2007 publications in the period of 2013-2016. The university also registered 1900 international students during 2017 (University of Free State, 2021). Due to the rise in the world population, the developed countries are more likely to depend on the migration of students (Hazelkorn, 2011; Magbondé, 2021).

The higher education sector in Zimbabwe has witnessed a decline in terms of the financial support from the government. This affected the quality of teaching and learning leaving students without study material and their lectures with small salaries. The economic and political crisis facing the country has also led to the migration of many academics and scholars in search of better economic opportunities and further academic training (Robison, 2020). While many Zimbabwean scholars migrated to the other countries in the SADC region, some also relocated to other regions of the world (Bere, 2016; Maharaj, 2016). The migration of scholars has both positive and negative impacts. The positive is that migrant scholars are more likely to return back home with new skills that help to grow their country. The negative side is that if migrant scholars do not return back home the industries would likely collapse in their home country (Docquier, 2014). Internationalisation of higher education has given more scholars the opportunity to migrate to other countries to further their education with the belief that studying in another country will bring more success to their career and also to contribute towards the advancement of the home countries (Lillyman & Bennett,2014).

2. Methodology

This chapter tried to understand the internationalisation of higher education, by looking at the push and pull factors that contributes to the massive movement of Zimbabwean scholars to other countries within the SADC region with a special focus on South Africa and Botswana. The chapter also looks at the impact of this massive movement on both the sending

country and receiving countries as well as innovative ways of enhancing the internationalisation of the African higher education sector. Some of the materials used in this particular chapter involve policy documents, articles, and published material specifically with regards to the internationalisation of higher education institutions and Zimbabwean scholars. Websites were also used to access information on the internationalisation of higher education.

3. Overview of the migration of Zimbabwean scholars in the Southern African Development Community region

The South African higher education sector entered a partnership with the Zimbabwean government in the Presidential Scholarship which targeted the Zimbabwean students who were the top achievers on the advanced level. The aim of the partnership was for the higher education sector in South Africa to enroll Zimbabwean students. These students were funded by the Zimbabwean government and were expected to return home to work in Zimbabwe. Gubba (2014) stated that South Africa has a well-developed system in the higher education sector which helps South Africa to keep on attracting more Zimbabwean scholars. In 2014 South Africa ranked 4th in attracting more scholars from other countries. The majority of scholars migrating to South Africa to pursue their education are from Zimbabwe. During 2014, South Africa received 11,247 degree-seeking students from Zimbabwe (UNESCO, 2020).

3.1 *Push and pull factors contributing to Zimbabwean scholars' migration to South Africa and Botswana*

The push-pull theory attributes the migration of people into another country according to the following factors such as: push factors, which repel people from a place, pull factors, which attract people to a place, intervening obstacles that are barriers to migration, and personal factors which influence a person's decision to migrate (Faist, 2012; Jansen, 2016). These

factors are different for every migrant or prospective migrant (Jansen, 2016). Migration eventually occurs when pull factors outweigh the push factors (Faist, 2012). This means that the positives in the destination country must outweigh the negatives in both countries of origin and destination. What might attract one person may repel another. A study that was conducted in Zimbabwe on the emigration of professionals highlighted major push factors such as low remuneration, low job satisfaction, collapse of funding, the political climate and declining currency exchange regimes. The pull factors include attractive salaries and research and study opportunities, among others (Shumba, & Mawere, 2012; Robinson, 2020).

The Zimbabwean higher education sector standards decreased after the year 2000, which drove many scholars to join the South African higher education sector (Gandawa, 2015). The location of the host nation is one of the factors that scholars consider before migrating to another country (Wilkens & Huisman, 2011). The fact that South Africa is considered one of the countries in the SADC region that is doing well economically, could be another factor motivating Zimbabwean scholars to migrate to South Africa. Zimbabwean scholars prefer to further their studies at South African higher learning institutions since it offers programmes that are needed in the working environment (Sivize, 2017) in comparison to other countries in the SADC region. The corruption that took place in the higher education sector of Zimbabwe post 2000, has caused many Zimbabwean scholars to doubt the credibility of the Zimbabwean higher education sector (Chingarande, 2018).

According to Garwe (2014), Zimbabwean scholars have lost their faith in the Zimbabwean higher education system which motivated them to seek quality education in South Africa regardless of the international ranking that the higher education sector in Zimbabwe enjoyed before 1980. People who support the opposition parties in Zimbabwe are also forced to migrate due to political persecution (People Against Suffering Oppression and Poverty, 2012; Robinson, 2020). Teachers who were accused of supporting the opposition

parties in Zimbabwe, became the victims of political violence which forced them to migrate to South Africa for their safety (Crush, Tawodzera, Chikanda, Ramachandran and Tevera, 2017). Additionally, Rian and Weda (2017) stated that some Zimbabwean scholars migrate to South Africa to reunite with their families who left Zimbabwe for a better life.

In another study, Chimucheka (2012) highlighted that Zimbabwean scholars migrated to South Africa because they believed that the higher education sector in South Africa promoted transformation and an open space for them to grow at the personal level. Economic challenges are also a major driving force for Zimbabwean lecturers to leave their country to go and look for better opportunities in South Africa and elsewhere (Robinson, 2020). Botswana was one of the countries in the SADC region who took advantage of the brain drain from Zimbabwe after the year 2000. The government of Botswana quickly hired migrated scholars to work in the higher education sector and health sector (Campbell & Crush, 2012). The collapse of the Zimbabwean economy around 1998 – 2004 left many Zimbabwean scholars with no choice to migrate to find better living and working conditions. Many scholars also migrated to South Africa due to the underpayment from the Zimbabwean government (Crush et al, 2017). The good infrastructure in the higher education sector in South Africa also attracted millions of Zimbabweans to study in South Africa (Idemudia, Williams & Wyatt, 2013). The family background of the Zimbabwean students plays a vital role in their migration to South Africa. Zimbabwean students who come from rich families and children of top government officials migrate to further their education at the higher education institutions of South Africa without the need for scholarships unlike students who come from less privileged backgrounds (Gubba, 2014).

3.2 *Effects of the emigration of Zimbabwean scholars on the sender (Zimbabwe)*

The migration of people from a country provides both negative and positive effects to the sending country. Positive effects include the economic benefits stemming from the sending

back of remittances to the country of origin, poverty reduction through investments, job creation and improved well-being of families and communities that benefit from the remittances (McDuff, 2015; Crush et al., 2017; World Bank, 2017; Awumbila, Owusu, & Teye, 2014). Scholars who migrate from Zimbabwe to South Africa and who work there are able to send remittances for their children's education (Dube, 2014).

Migration is also associated with negative effects in the sending country such as brain drain and the separation of families (Nyanga, Mpala & Chifamba, 2012). The migration of scholars from Zimbabwe to South Africa, Botswana and other countries affects Zimbabwe as a country in multiple ways. One of the major effects is the brain drain. Brain drain is a major concern in Zimbabwe since the country continues to lose its human capital that took enormous resources to nurture and produce through education and specialized training for which it is not compensated by other nations in the region (Nyanga et al., 2012). Even though the migrants send remittances back home, these have been insufficient to compensate for human capital losses.

After the year 2000, Zimbabwe has experienced a shortage of teachers as a result of the teachers migrating to South Africa (Weda, 2012). The teachers migrated to South Africa to receive better salaries. Furthermore, due to the migration of Zimbabwean scholars to the other countries within the SADC region, Zimbabwe continues to lose higher skilled scholars, which has also contributed to problem management in higher education (Bere, 2016). By sending money back home to their families in Zimbabwe, the Zimbabwean scholars contribute to the well-being of their families who remain at home (Sithole and Dinbabo, 2016). Regardless of the remittances that are sent back, Zimbabwe's economy continues to decline since the Zimbabwean government cannot utilize their skills.

Muyambo, and Ranga (2020) argue that the migration of Zimbabweans to South Africa had a devastating effect on the families of migrants who remained in Zimbabwe. Migration

continues to affect people's lives, especially children due to parents and children staying apart. Some children grow up without morals because the people responsible for instilling these are absent (Nyanga et al., 2012).

3.3 *Effects of the Zimbabwean migrant scholars to South Africa and Botswana*

Migration also has positive and negative effects for the destination country. Countries with certain skills shortages and a growing aged population tend to benefit immensely from acquiring skills and human resources from other countries (Dzinamira & Masuka, 2021). Rian and Weda (2017) argues that South Africa has been benefiting from the migration of Zimbabwean teachers since South Africa experienced a shortage of teachers especially in mathematics and science subjects. Zimbabweans forms the largest group of migrant teachers and lecturers in South Africa (Department of Higher Education & Training (DHET), 2013; Maharaj, 2016). South Africa welcomes these migrant teachers and lecturers to ease the country's own shortage. The migration of Zimbabweans to South Africa provides a solution to the skills shortage in the country especially in STEM subjects that are critical for the country's development and economic growth. During the COVID-19 lockdown, different stakeholders appealed to the government to bring back the teachers to the country since the Zimbabwean teachers could not come back to South Africa due to the closure of borders (Matlala, 2020). This signifies the valuable contribution of Zimbabwean teachers especially in the STEM subjects.

The government of South Africa acknowledged that critical skills are needed for the development of the country, and these are used to guide the migration of people from other countries to South Africa. For example, in February 2022, a new critical skills list was gazetted specifying the skills that are scarce and are necessary for the development of the country (DHA, 2022). This alone indicates that the government benefits from the migration of personnel from other countries including Zimbabwe.

Although Botswana hosts quite a significant number of immigrants including scholars from Zimbabwe, the literature does not focus on the positive effects that Zimbabweans can have on the country (Kiwanuka & Monson, 2009). According to Betts (2013) Zimbabweans are negatively perceived in Botswana due to their illegal migration to the country. This in turn contributes to their invisibility and occupation in the informal sectors where they do not contribute to the growth of the country. The dislike of Zimbabweans in Botswana is attributed to crime, competition of job opportunities and increased prostitution that is linked to the spread of HIV (FMSP, 2009). Foreigners also have also been alleged to have negative effect on the development of South Africa and are blamed for many social ills including crime, competition over job opportunities, strain on resources meant for citizens and prostitution (Landau & Achiume, 2015; Gordon, 2018). This makes them less welcome which causes incidents of xenophobia. Even though there is evidence of their immense contribution to the growth of the economy, it remains unclear how their contribution can be harnessed for the development of the nation while also protecting the interests of the citizens and safeguarding the country from any criminal elements.

3.4 *Innovative ways to promote internationalisation in the African higher education sector*

The participation of scholars in cultural exchange programmes help to promote internationalisation in higher education in South Africa (Enaifoghe, Ndlovu, Maduku and Obadire, 2018). The higher education sector should design a framework that will support the promotion of cultural exchange programmes in Africa. The global pandemic affected the internationalisation of higher education since exchange programmes were canceled because traveling was prohibited. This affected teaching and learning in the African higher education sector. Against this backdrop the higher education sector in Africa needs to start planning for the future (Obadire, Mashau & Misumi, 2020). Higher education depends on human-centered design thinking. According to Doscher (2020)

scholars in the higher education sector need to confront the old ways of doing things and consult different stakeholders in shaping the future of higher education in Africa. Research outputs have proven to be the key driver for the realization of the internationalisation of higher education. African higher education thus needs to rethink the way research is done and should begin to collaborate with international scholars to increase research outputs (Sehoole & Knight, 2013).

COVID-19 affected the internationalisation of the African higher education sector. COVID-19 demonstrated the need for effective leadership in the African higher education sector that will make sure that the digital mobility for internationalisation becomes a reality. African higher education also needs to prioritize joint-degree programmes in the SADC region that will be implemented through virtual conferences and seminars (Ligami,2021). This is a positive initiative that will require the African government to invest in technology and the internationalisation of higher education. The African higher education sector should also start providing in-service management training to internal administrators who will effectively implement the internationalisation of higher education (Kasenene, 2011). Higher education should also be supported financially.

Migration is an important aspect in the incorporation of intercultural, international and global dimensions in higher education in order to enhance the quality of education and research. According to the Policy Framework for the Internationalisation of Higher Education in South Africa, migration Policies such as the White Paper of Migration (2012) are important in the realizing and regulation of international migration in the country (Department of Higher Education and Training, 2019). Therefore, the government and different stakeholders need to ensure that migration of skilled personal is facilitated and harnessed through the providing of permanent residence permits and work visas. Research collaboration among scholars in the SADC region can promote internationalisation of higher education. Through these collaborations, connections with other partners, governments,

agencies, and foundations can be formed which are important vehicles in the internationalisation of migration.

4. Conclusion

This chapter contributes to the debate on the internationalisation of higher education in South Africa. The higher education policy framework in internationalisation should interact with the national policies of immigration in South Africa. This is extremely essential as migration plays an important role in the internationalisation of higher education specifically in South Africa, a country which attracts many migrants. Political instability and economic challenges in Zimbabwe have contributed to the rapid migration of Zimbabwean scholars to other countries in SADC and beyond. Migration of the Zimbabwean scholars has had both positive and negative impacts on the sustainable and economic development of the country. The most prominent negative impact is brain drain, where skilled professionals leave the country that plays an important role in the development of the country. South Africa and Botswana have been benefiting from the migration of Zimbabwean scholars by receiving skilled scholars in STEM subjects that impart their knowledge to South African students. Regardless of the knowledge that Zimbabwean scholars have in the STEM subjects and regardless of their contribution to the growth of the host country, they have been discriminated against to the extent where students in Botswana have been deported back home. This form of discrimination calls for a single internationalisation policy framework in the higher education sector in Africa. This will foster collaboration between all African universities and establish a single African Students Financial Aid Scheme Support (ASFAS) that can be used to support the migration of African students from their country to other nations. All of the different stakeholders need to support the realization of the internationalisation of higher education including the harnessing of migration. This will help in fostering social cohesion in the higher education sector in Africa where other scholars are not financially excluded.

There is a need for the higher education sector in the SADC region to develop a policy framework on Collaborative Online International Learning. This will ensure that African children are not left behind in terms of accessing education especially during the time of pandemics. Furthermore, the migration of Zimbabwean scholars to South African will help to enhance the practice of soft diplomacy that can play a vital role in reversing the brain drain where South African students in the higher education sector can learn from Zimbabwean scholars especially with regards to STEM subjects.

References

Awumbila, M., Owusu, G. & Teye, J.K. (2014). *Can rural-urban migration into slums reduce poverty? Evidence from Ghana.* (Migrating Out of Poverty Working Paper No 13). [Online]. Available http://www.migratingoutofpoverty.org/documents/wp-13---awumbila-owusu-teye-2014-can-rural-urban-migration-into-slums-reduce-poverty-final.pdf. (Accessed 12 March 2022).

Bere, S. (2016*). Transforming Zimbabwe's higher, tertiary education for better economic performance.* [Online]. Available from fhttps://www.newsday.co.zw/2018/03/transforming-zims-higher-tertiary-education-for-better-economic-performance/. (Accessed 13 February 2022).

Betts, A. (2013). *Survival Migration: Failed Governance and the Crisis of Displacement.* New York. Cornell University Press. https://doi.org/10.7591/cornell/9780801451065.001.0001

Campbell, E. & Crush, J. (2012). *Unfriendly Neighbours: Contemporary Migration from Zimbabwe to Botswana (rep., pp. 1-44).* Waterloo, ON: Southern African Migration Programme. SAMP Migration Policy Series No. 61. [Online]. Available from https://scholars.wlu.ca/cgi/viewcontent.cgi?article=1035&context=samp. (15 February 2022).

Chasi, S. (2019). *North–South partnerships in public higher education: A selected South African case study.* [Doctoral dissertation], University of the Witwatersrand, Johannesburg, South Africa. [Online].Available from http://wiredspace.wits. ac.za/handle/10539/28064. (Accessed 05 February 2022).

Chimonyo, T. C. (2019). *Experiences of unemployed Zimbabweans, living in Johannesburg, who graduated at South African universities* (Doctoral dissertation, University of the Witwatersrand, Faculty of Humanities). [Online]. Available from https://wiredspace.wits.ac.za/server/api/core/bitstreams/bbf54b66-fe53-43ca-828b-63f9e39bcee4/content. (Accessed 17 February 2022).

Chimucheka, T. (2012). A cost benefits analysis of international education: A case of Zimbabwean students in South Africa. *Educational Research and Reviews*,7(9), 223-229. https://doi.org/10.5897/ERR11.297

Chingarande, D. (2018). *Revealed: How grace faked her Ph.D. The Standard.* [Online]. Available from https://www.thestandard.co.zw/2018/02/18/revealed-grace-got-fake-phd. (13 Accessed February 2022).

Crush, J, Tawodzera, G, Chikanda, A, Ramachandran, S & Tevera, D. (2017). *Migrants in Countries in Crisis (MICIC) South Africa Case Study: The Double Crisis – Mass Migration from Zimbabwe and Xenophobic Violence in South Africa.* [Online]. Available from https://bit.ly/3CeG4BX (Accessed 04 February 2022).

Department of Higher Education and Training. (2019). *Policy Framework for Internationalisation of Higher Education in South Africa.* Department of Higher Education and Training: Pretoria. [Online]. Available from https://www.dhet.gov.za/Policy%20and%20Development%20Support/Policy%20Framework%20for%20Internationalisation%20of%20Higher%20Education%20in%20South%20Africa.pdf. (Accessed 08 February 2022).

Department of Home Affairs. (2022). *Government Gazette.: Critical Skills List 2022.* [Online]. Available from https://www. Gazetted_Critical_Skills_List_2022-compressed.pdf (dha.gov.za). (Accessed 06 February 2022).

Department of Higher Education & Training (DHET). (2013). *Evaluation of qualification sets submitted by migrant teachers in 2010.* Report. Pretoria, South Africa: DHET. [Online]. Available from https://www.dhet.gov.za/ Commissions%20Reports/Annual%20Report%20 2012%20-%202013.pdf. (Accessed 11 February 2022).

De Wit, H, Hunter, F, Howard, L and Egron-Polak, E (2015). *Internationalisation of Higher Education: Study.* Published by European Parliament Directorate-General for Internal Policies, Policy Department B: Structural and Cohesion Policies, Culture and Education. Document IP/B/CULT/ IC/2014-002. [Online]. Available from https://www. europarl.europa.eu/RegData/etudes/STUD/2015/540370/ IPOL_STU(2015)540370_EN.pdf. (Accessed 17 February 2022).

De Wit, H & Philip G. Altbach, P.G. (2021). Internationalisation in higher education: Global trends and recommendations for its future, *Policy Reviews in Higher Education*, 5:1, 28–46, https://doi.org/10.1080/23322969.2020.1820898

DHET (Department of Higher Education and Training) (2019). *Policy framework for internationalisation of higher education in South Africa.* [Online]. Available from https://www.dhet. gov.za/Policy%20and%20Development%20. (Accessed 13 February 2022).

Docquier, F. (2014). The brain drain from developing countries. *IZA World of Labor*, 3(1), 1–9. https://doi.org/10.15185/ izawol.31

Doscher, S. (23 May 2020). *Design thinking for innovative internationalisation of HE.* University World News. [Online]. Available from https://www.universityworldnews.com/ post.php?story=20200519084043803.(Accessed 18 February 2022).

Dube, T. (2014). "The socio-economic effects of cross-border migration on Zimbabwe's border lying communities - A case study of Beitbridge and Plumtree", *International Journal of Development and Sustainability*, 3(1), 89-107. (Accessed 16 February 2022).

Dzinamarira, T., & Musuka, G. (2021). Brain drain: An ever-present; significant challenge to the Zimbabwean public health sector. *Public Health in Practice*, 2, 100086. [Online]. https://doi.org/10.1016/j.puhip.2021.100086

Edwin, D., & Glover, E. (2016). Factors Responsible for Youth Migration to the City: The Case of Ghana. *Journal of Social Sciences and Humanities*, 2(1), 10-22.

Faist, T. (2012) *Migration*. Mexico: John Willey and Sons. https://doi.org/10.1002/9780470670590.wbeog388

Gandawa, G. (2015). *Official Opening: Masvingo Zimbabwe Open University regional centre*. Presentation, Masvingo. [Online]. Available from https://zou.ac.zw/masvingo_regional_campus/about-us. (Accessed 15 February 2022).

Gordon, S. (2018) Who Is Welcoming and Who Is Not? An Attitudinal Analysis of Ant-Immigrant Sentiment in South Africa. *South African Review of Sociology*, 49 (1), 72-90. https://doi.org/10.1080/21528586.2018.1475252

Gubba, A. (2014). *The effects of student migration to South African universities on higher education in Zimbabwe.* Doctorate Thesis, University of South Africa, South Africa [Online]. Available from https://uir.unisa.ac.za/handle/10500/18574. (Accessed 07 February 2022).

Hazelkorn, E. (2011). *Rankings and the Reshaping of Higher Education: The Battle for World-Class Excellence.* New York, Palgrave Macmillan. https://doi.org/10.1057/9780230306394

Idemudia, E., Williams, J., & Wyatt, G. (2013). Migration challenges among Zimbabwean refugees before, during and post arrival in South Africa. *Journal of Injury and Violence Research*, 5(1), 21-27. https://doi.org/10.5249/jivr.v5i1.185

IEASA (2020, May 29). *Position paper – higher education internationalisation in South Africa in the context of the Covid-19 pandemic: Impact on international students.* IEASA. [Online] http://ieasa.studysa.org/wp-content. (Accessed 09 February 2022).

Iwara, I, Enaifoghe. A.O Ndlovu, W, Maduku, H, Obadire, O.S. (2018). Exploring the role of students in the attainment of Africanisation and internationalisation in post-apartheid South Africa. *African Renaissance*, 15, (2),193 – 213. https://doi.org/10.31920/2516-5305/2018/v15n2a9

Jansen, C. J. (2016) "Migration: a sociological problem". *Readings in the sociology of migration.* Oxford: Pergamon Press

Kasenene, E.S. (2011). Obstacles to the Internationalisation of Higher Education in Africa: the Case of Uganda. *Makerere Journal of Higher Education*, 3(1);73 – 89. https://doi.org/10.4314/majohe.v3i1.7

Kiwanuka, M & Monson, T (2009). *Zimbabwean migration into Southern Africa: new trends and responses.* Johannesburg: University of Witwatersrand. [Online]. Available from http://www.migration.org.za/wp-content/uploads/2017/08/Zimbabwean-migration-into-Southern-Africa-new-trends-and-responses.pdf. (Accessed 95 February 2022).

Landau, L. & Achiume, T. E. (2015). *The African Union migration and regional intergration framework.* [Online]. Available from http://www.accord.org.za/publication/the-african-union-migration-and-regional-integration-framework/ (Accessed 26 February 2022).

Ligami, C. (03 June 2021). *Pandemic demands innovation in internationalisation.* University World News: Africa Edition, Southern African. [Online]. Available from https://www.universityworldnews.com/post.php?story=20210603070806975. (Accessed 07 February 2022).

Lillyman, S., & Bennett, C. (2014). Providing a positive learning experience for international students studying at UK universities: A literature review. *Journal of Research in International Education,* 13(1), 63-75. https://doi.org/10.1177/1475240914529859

Magbondé, G.K. (2021). How Sub-Saharan African Countries Students Choose Where to Study Abroad: The Case of Benin. *Social Inclusion* 9(1), 278–287. https://doi.org/10.17645/si.v9i1.3647

Maharaj, A. (2016). Academic Mobility and Immigration trends in South African higher education institutions. *Journal of Economics and Behavioral* Studies, 8(4), 52-66. https://doi.org/10.22610/jebs.v8i4(J).1363

Matlala, A.J. (2020). *400 maths and science teachers from Zim cannot access border gates – DA.* [Online]. Available from https://www.citizen.co.za/news/South-africa/education/400-maths-and-science-teachers-from-zim-cannot-access-border-gates-da/. (Accessed 02 February 2022).

Mawoyo, I. (2012*). Zimbabwe Country Profile. A Profile of Higher Education in Southern Africa.* [Online]Available from http://www.zim.gov.zw/index.php/ministries/ministry-of-higher-and-tertiaryeducation. (Accessed 09 February 2022).

Meersman, B. (23 February, 2021). *Zimbabwe Refugee Students Get Reprieve in Botswana. All Africa,* Harera. [Online]. Available from https://allafrica.com/stories/202102230671.html. (Accessed 13 February 2022).

Muyambo, B & Ranga, D. (2020). *Socio-economic impacts of labour migration from Zimbabwe to South Africa: an investigation based on rural Bikita District, Migration and Development*, 9(2), 274-290, https://doi.org/10.1080/21632324.2019.1603670

Nyanga, T., Mpala, C., & Chifamba, E. (2012). Brain Drain: implications for sustainable development in Zimbabwe. *Journal of Sustainable Development in Africa*, *14*(8), 141-153.

Obadire, O.S, Mashau, T.S & Misumi, C. (2020). Understanding internationalisation of higher education. *Gender & Behaviour*, 18(4), 16767- 16786.

People Against Suffering Oppression and Poverty (2012), "*Strangling the Lifeline: An analysis of remittance flows from South Africa to Zimbabwe*". [Online]. Available from http://www.passop.co.za/wpcontent/uploads/2012/04/Strangling-the-lifeline-PASSOP-Report-on-Remittances-to-Zimbabwe. (Accessed 10 February 2022).

Rian De. V & Weda, Z. (2017). Zimbabwean teachers in South Africa: A transient greener pasture *South African Journal of Education* ,37(3),1-9. https://doi.org/10.15700/saje.v37n3a1410

Robinson, K. B. (2020). Perspectives of highly skilled migrants on return migration: A qualitative case study of Zimbabwean lecturers in the Western Cape of South Africa. Masters dissertation, University of Western Cape, South Africa. [Online). Available from http://etd.uwc.ac.za/bitstream/handle/11394/7836/robinson_m_ems_2020.pdf?sequence=1&isAllowed=y. (Accessed 08 February 2022).

Sehoole, C and Knight, J. (2013). *Internationalisation of African Higher Education Towards Achieving the MDGs*. Boston College, USA. Sensepublisher. https://doi.org/10.1007/978-94-6209-311-9

Shumba, A., & Mawere, D. (2012). The causes and impact of the brain drain in institutions of higher learning in Zimbabwe. *International Migration*, *50*(4), 107-123. https://doi.org/10.1111/j.1468-2435.2012.00749.x

Sithole, S. T., & Dinbabo, F. M. (2016). Exploring the youth migration and food security nexus: Zimbabwean youths in Cape Town, South Africa. *African Human Mobility Review*, 2(2), 512 – 537. https://doi.org/10.14426/ahmr.v2i2.768

Sivize, B. (2017). *Eight South African universities ranked in world top 1000*. [Online]. Available from https://www.theSouthafrican.com/eight-South-african-universities-world-top-1000/. (Accessed 05 February 2022).

University of Free State. (2021). *What is internationalisation*? [Online]. Available https://www.ufs.ac.za/supportservices/departments/international-affairs/about-us/what-is-international-affairs-. (06 February 2022).

UNESCO. (2020). *Global flow of tertiary students.* [Online]. Available from Http://uis.unesco.org/en/uis-student-flow. (06 February 2022).

Weda, Z.L. (2012*). Factors influencing the migration of teachers from Zimbabwe to South Africa.* Doctorate thesis. University of South Africa. [Online]. Available from https://uir.unisa.ac.za/bitstream/handle/10500/9755/. (Accessed 8 February 2022).

Wilkins, S. & Heisman, J. (2011). International Student Destination Choice: The Influence of Home Campus Experience on the Decision to Consider Branch Campuses. *Journal of Marketing for Higher Education,* 21(1), 61-83. https://doi.org/10.1080/08841241.2011.573592

World Bank. (2017) *Migration and Remittances: Recent Developments and Outlook.* Migration and Development Brief 27,World Bank, Washington D.C. [Online]. Available: http://pubdocs.worldbank.org/en/992371492706371662/ MigrationandDevelopmentBrief27.pdf. (Accessed 28 April2018).

Zimbabwe National Statistics Agency (2012), "*Migration in Zimbabwe: A Country Profile*", . [Online]. Available from www.zimstat.co.zw/dmdocuments/DigestQrt32012/ Migration. (Accessed 13 February 2022).

Chapter 5

Internationalisation of Postgraduate Research within the Context of Africa

Divinia Jithoo 🆔
Durban University of Technology

Peter Cunningham 🆔
Nelson Mandela University

Patricio Langa 🆔
University of the Western Cape

Abstract

Global participation in research statistics indicate that the engagement in the conception or the creation of the creation of new knowledge, products, processes, methods, and systems in regions such as Africa, South-East Asia and South America is fairly limited. This limitation includes the participation of researchers at a post-graduate level. Enhancing the quality of research for the advancement of new and innovative knowledge, and to address developmental challenges through internationalization has been widely argued.

This chapter has provided insight into the advancement of post-graduate intra-African research from a South African perspective. Statistics of current and completed post-graduate research in Africa has been presented. These statistics have been contextualized in the internationalization of higher education. Concomitantly, post-graduate research as a strategy to advance internationalization and in particular,

internationalization of research has been discussed. Furthermore, the role of internationalization in developing a collaborative research culture in African higher education has been explored. In addition, the chapter has highlighted key strategies for developing an inclusive research culture through post-graduate capacity building.

The arguments for advancing internationalization at a higher degree level has also focused on international virtual exchange as a facilitator of research collaboration and highlighted the benefits of supervisory capacity through virtual spaces. Furthermore, additional facilitators for intra-Africa research collaboration have been presented together with institutional missions for advancing research on the African continent.

Finally, a reflective perspective of a post-graduate researcher in Africa has highlighted key challenges together with methods of addressing unique challenges within the South African context. Through the reflective perspective, the understanding of engaging Africa centric methodologies for research has been explored for the advancement of more contextual research methodology in the developing world.

1.   Introduction

Africa contributes no more than 1.1% to global scientific knowledge. This amounts to just 79 scientists per million of the inhabitants on the continent (Karluki, 2015). As new knowledge is a critical driver of human health and wellbeing, economic development and environmental sustainability, there is a need to enhance participation from Africa in the contribution to scientific knowledge. Kyobutungi et al. (2021) argue that Africa's overreliance on international funding has contributed to the under-representation of Africans in both local and international research and development scenes. This begs the question: Can enhanced intra-Africa collaboration advance institutional internationalisation goals and in turn advance the contribution by Africa to global knowledge innovation?

Global statistics on the contribution by developing countries highlights the need for insight into advancing international collaboration which includes regional collaboration, along with the importance of skills development for early career researchers in the under-represented regions. Figure 1 below depicts the global statistics for researchers in Research and Development (R&D).

Researchers in R&D per million people, 2015
Researchers in Research & Development (R&D) are professionals engaged in the conception or creation of new knowledge, products, processes, methods, or systems and in the management of the projects concerned. Postgraduate PhD students engaged in R&D are included.

No data   0   30   300   500   1,000   2,000   4,000   6,000   8,500

Source: UNESCO (via World Bank)   CC BY
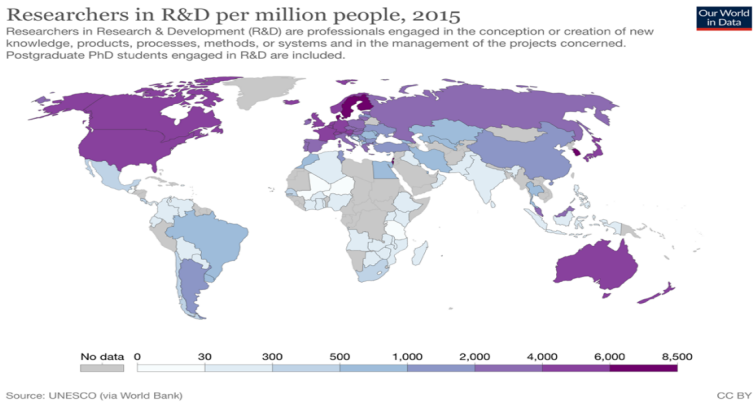
Figure 1:   Researchers in R&D per million people, 2015
Source: Our World in Data (2021)

Figure 1 outlines global participation in Research and Development (R&D), indicating representation per region as of 2015. These statistics indicate that engagement in the conception or the creation of new knowledge, products, processes, methods and systems is limited especially in the regions of Africa, South-East Asia and South America. This includes the participation of researchers at a postgraduate level. Figure 1 also illustrates the difference in participation levels when comparing regions such as North America and Western Europe. This figure further demonstrates the unevenness in contributions to research even in what is considered the global North, which is sometimes referred to as the global science centre. This unevenness in contribution requires greater global participation towards a more equitable and inclusive global research culture.

Amarante et al. (2021, p. 1) affirm such uneven global participation in their findings that conference presentations, journal articles and citations, including the bulk of research on development and development policies in the global South, is conducted by researchers from the global North. Their findings show that Southern universities represent 9% of conference presentations, while Northern universities represent 57%. Furthermore, one in six articles published in prominent development journals between 1990 and 2019 were written by researchers from the global South, whereas three quarters of these publications were produced by Northern researchers. Moreover, only 11% of the published articles included collaboration with a Southern researcher. These statistics show that despite calls for increased North–South collaborations, there has been little or no improvement in the participation from Southern researchers in developmental research.

Literature covering the conducting of research has focused mainly on a research paradigm primarily espoused in the developed world. Both Lupu and Michelitch (2018) and Confraria (2019) have critiqued different types of research methods developed mainly from experiences in the global North, including survey methodology and bibliometric studies. Lupu and Michelitch (2018) argue that most survey methodologies derive from experiences in countries such as the United States of America (USA). Additionally, they note that developing world researchers confront very different challenges when collecting high quality data compared to those in developed countries. Furthermore, Confraria (2019, p. 28) notes that bibliometric studies do not consider the complex reality of research in the global South where scientific research output is not necessarily cited for various reasons. Such reasons include:

- International researcher indifference to contextual topics in the global South
- Language bias in most international journals published only in English.

- Different levels of access to international journals between the global North and the global South (Confraria, 2019, p. 29).

The above scenario has drawn sharp criticism from researchers in the global South. Hence, established researchers from the North do not promote equitable and inclusive global development of scientific researchers, including those from the periphery. Kyobutungi et al. (2021) call for African political and research leaders to take greater responsibility for streamlining research programmes and funding. "We emphasise that responsibility for addressing the current gaps in research and development lies with the international community – as well as with African governments and their institutions" (Kyobutungi et al., 2021).

The United Nations (UN) Sustainable Development Goals (SDG) entrench a collaborative culture between experienced educators and the youth for a research agenda that extends well beyond 2030 in order to ensure progress is made toward addressing and achieving the SDGs (Kyle, 2020, p. 4). Makoni (2017) mirrors this position, citing Professor Mamokgethi Phakheng who notes that universities could help to achieve the SDGs through capacity building and collaboration. Furthermore, international research collaboration can be leveraged to bridge the scientific divide. Momtazmanesh et al. (2021, p, 1670) argue that collaboration and internationalisation can help researchers on the periphery to access expert scientists in their field along with additional resources such as equipment or funds, as well as access to additional knowledge and skills, increased productivity, and enhanced visibility of their work.

The need for advanced quality of research to address development challenges through internationalisation and its potential to lead to new and innovative knowledge, has been widely argued. Tuhiwai Smith (1999) highlights a new agenda for indigenous activity in the global South that goes beyond the decolonisation aspirations of a particular community. Instead, the focus is on the development of continental and global

strategic alliances that involve revitalisation and reformation of education, culture and tradition which have been shaped by the dominant Eurocentric perceptions and impositions of the colonial rulers for centuries.

Toivonen (2021) in pursuing this line of thought, states that collaboration with the global South needs to step out of the traditional form of development co-operation to a more horizontal collaboration in education, research, and innovation, thereby allowing universities to be pioneers who bring in new ways of co-creational collaboration and equally distribute the global responsibility in solving common challenges.

Despite these challenges and various paradigms regarding the trajectory of scientific research, it can be concluded that more focused action research requires a more comprehensive approach to higher education internationalisation. Such an approach would allow for horizontal and vertical integration of all stakeholders involved in knowledge generation. The goal of such an approach is to work toward a more equitable and equal scientific space.

2. Postgraduate Research in Africa

2.1 *Participation in postgraduate research*

The evolution of academic Doctoral qualifications in Africa has been regionally uneven. In South Africa, numerous policies have been produced to incentivise the increase of Doctoral qualifications. Such policies include the restructuring of the South African higher education landscape with a renewed focus on postgraduate degrees.

Mouton (2011, p. 13) discusses policy documents such as the 1997 Education White Paper 3 and the 2001 Human Resources Strategy for South Africa, which both even then highlighted the issue of postgraduate qualifications as prioritised objectives for improving the supply of high-quality skills. Mouton (2011, p. 13) also highlights The National

Table 1: South African Public Higher Education headcounts

Year	Programme Level					Total
	Occasional Students	Under-graduate degrees and diplomas	Postgraduate, below Master's level	Master's degrees	Doctoral degrees	
2001	23,851	54,4183	55,914	34,901	6,518	665,367
2002	32,409	537,592	60,840	39,364	7,708	677,913
2003	37,194	562,343	65,203	43,953	8,380	717,793
2004	23,175	597,609	69,267	45,333	9,104	744,488
2005	19,271	602,612	61,622	44,533	9,434	737,472
2006	22,633	607,513	58,510	42,899	9,828	741,383
2007	25,696	624,989	59,179	41,172	10,051	761,087
2008	25,474	655,305	66,902	41,712	9,994	799,387
2009	24,613	684,419	74,495	43,723	10,529	837,779
Average annual growth rate: 01 – 09	−2,3%	2,9%	1,8%	1,5%	5,4%	2.6%

Source: Mouton (2011, p. 15)

Development Plan of 2001 for its specific goals that focus on postgraduate education, including recommendations to increase the outputs of master's and Doctoral (PhD) students. Also noted are the recommendations for increasing research outputs through newly established centres of research excellence facilitating more collaboration. Mouton (2011, p. 15) presents in Table 1, the headcounts in public higher education institutions between 2001 and 2009.

Mouton (2011, p. 15) points out that between the years 2001 and 2009, postgraduate student numbers grew at master's and Doctoral level at a rate of 1.5% and 5.4% respectively. These statistics include South African and international students at South African public higher education institutions. The inclusion of international students will be explored further in this chapter through the discussion of internationalisation debates at a postgraduate level. It is important to note here that the SADC protocol calls for the inclusion of 5% of students from the SADC region in student enrolments at universities.

In 2011, Assaf (2022, p. 112) identified PhD studies as being important to national development and argued for a more concerted and called for government to make a focused effort to improve science initiatives. Teffera (2020, p. 239) supports the statistics presented by Mouton and discusses the growth rates in Doctoral participation between 2009 and 2016. In 2016 there were 21 510 students compared to the 13285 students in 2011; however, he also notes (2020, p. 243) that less than 50% of Doctoral students in the country successfully completed their degree. He further argues that Doctoral education has taken centre stage as a vital avenue for the production of knowledge and is critical to foster socio-economic development global competitiveness.

In 2017, the number of Doctoral graduates was 54 per million in the South African population, showing an increase from 28 in 2010. However, compared to SA's BRICS counterparts, the trajectory is shown to be lower (DHET, 2020, p. 2). Figure 2 illustrates the difference in Doctoral degree

graduates per country, including those of the BRICS network, in the year 2015.

2015

Country	Value
China	54 891
Russian Federation	29 632
Germany	29 218
United Kingdom	26 636
India	22 528
Brazil	18 625
Republic of Korea	13 077
Malaysia	4 058
South Africa	2 530
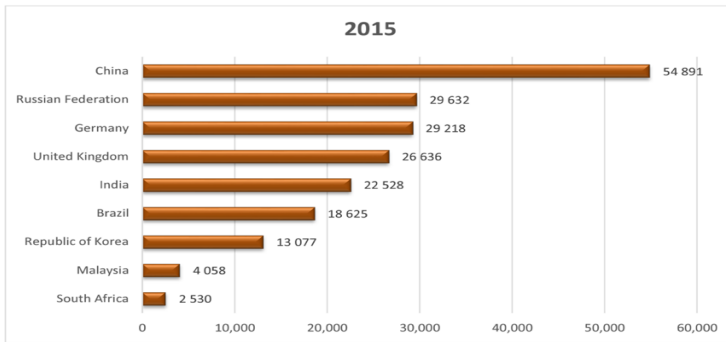
Figure 2: 2015 Doctoral Degree graduates: BRICS Network and other countries.
Source: DHET (2020, p. 4)

The South African National Development Plan (NDP) also recognises that knowledge production must increase if South Africa's developmental goals are to be achieved. The DHET (2020, p. 1) notes that Doctoral graduate numbers in South Africa are significantly lower than those in developed countries. As a result, the NDP targets an increase in the percentage of PhD qualified academic staff from 34% to 75%, which would mean more than 100 Doctoral graduates per million by 2030.

Figure 3 outlines the number of international students enrolled at South African higher education institutions. This includes PhD international students. It is important to note that the enrolment of international students is stronger at a postgraduate level.

Table 2: International students enrolled in South African higher Education institutions.

Country	Contact								Distance								Total Contact and Distance
	Occasional students	Undergraduate Certificates and Diplomas	Undergraduate Degrees	Advanced Diplomas and Postgraduate Certificates in Education	Postgraduate below Master's Level	Master's Degrees	Doctoral Degrees	Total Contact	Occasional students	Undergraduate Certificates and Diplomas	Undergraduate Degree	Advanced Diplomas and Postgraduate Certificates in Education	Postgraduate below Master's Level	Master's Degrees	Doctoral Degrees	Total Distance	
Zimbabwe	30	520	4 871	38	752	2 272	2 134	10 617	245	1 215	7 228	175	1 297	573	343	11 076	21 693
Namibia	23	98	920	1	367	752	224	2 385	28	453	467	243	629	111	34	1 965	4 350
Democratic Republic of the Congo	12	1 679	848	39	121	324	114	3 137	33	147	281	22	74	51	23	631	3 768
Nigeria	8	173	359	13	127	689	1 621	2 990	19	49	303	10	93	87	111	672	3 662
Lesotho	11	428	1 193	6	241	522	233	2 634	22	91	402	16	128	34	14	707	3 341
Swaziland	7	280	967	6	114	290	171	1 835	26	77	632	48	202	90	23	1 098	2 933
Zambia	6	46	339	0	77	281	248	997	6	25	222	5	33	39	24	354	1 351
Botswana	2	26	281	1	87	292	164	853	3	32	335	6	35	36	15	462	1 315
Kenya	14	18	253	0	66	249	396	996	2	6	66	1	11	38	35	159	1 155
Ghana	3	15	48	7	40	218	439	765	3	10	68	4	48	29	139	301	1 066
Malawi	5	32	193	2	65	230	168	695	6	20	112	1	25	9	5	178	873
Other foreign nationalities	1 643	1 163	2 821	38	642	2 326	2 246	10 879	85	267	1 028	31	281	190	584	2 466	13 345
Total	1 764	4 478	13 093	146	2 699	8 445	8 158	38 783	478	2 392	11 144	562	2 856	1 287	1 350	20 069	58 852

Source: DHET (2020, p. 16)

Cloete, Sheppard, and Bailey (2015, p. 77) posit that Africa has been littered with hasty studies, followed by high-profile conferences with grand declarations and recommendations for the development of Africa through higher education, research and development. However, the challenge is to undertake a more systematic, informed approach to research to diagnose problems rather than pursuing hasty prescriptions. In the South African system, there has been a shift in discourse from equity to development, as central to a highly productive, globally connected economy are high-level skills and extensive participation in higher education. Cloete, Sheppard and Bailey (2015, p. 79) identify performance-based grants to develop centres or networks of excellence within and across institutions. These grants encourage international exchange partnerships, as ways of addressing the challenges contributing to the slow growth of participation in research and development at a postgraduate level.

At a regional level, the Continental Education Strategy for Africa 2016–2025 calls for quality and relevant education, training, and research, thus indicating that these are core to scientific and technological innovation, creativity, and entrepreneurship. Furthermore, the revitalisation and expansion of tertiary education, research, and innovation to address continental challenges and to promote global competitiveness, is highlighted as a strategic objective of this strategy. The reorientation of tertiary education enrolments at a postgraduate level is highlighted in relation to economic, social, and industrial development and included in the strategy as a challenge. Furthermore, the rate of cross border collaboration needed for continental development and the investment by specific countries, are also highlighted as challenges.

Authors such as Brothwell (2015) and Lupu (2021) have described countries such as Tunisia, Egypt, Nigeria, South Africa, and Ethiopia as countries in Africa with strong higher education systems. Teferra (2020, p. 239) asserts that South Africa has arguably the best developed higher education system in Southern Africa, producing the largest share of academic research and publication on the continent.

2.2 *Postgraduate graduation statistics*

The DHET (2021, p. 19) reports that in the public higher education sector, between the period of 2009 and 2019, the growth rate of Doctoral level graduates was the lowest when compared

to that of undergraduate graduates and other types of postgraduate qualifications such as master's degrees. Mphekgwana et al. (2020, p. 16213) illustrate the trend in master's and Doctoral dropout rates at historically disadvantaged universities in South Africa between 2011 and 2017, as depicted in Table 2.

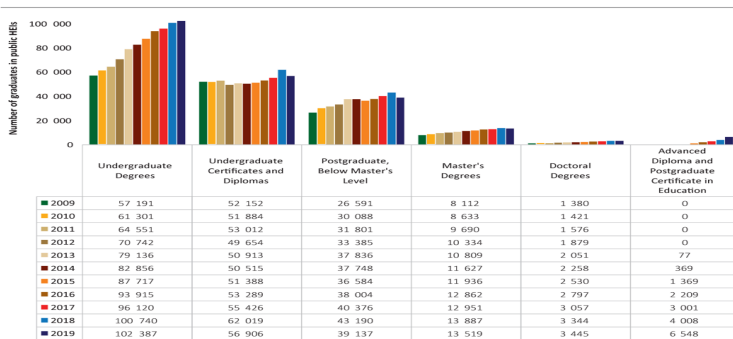**Table 3**:   Postgraduate drop-out rates in South Africa

A Trend in Master's and Doctoral dropout at the University between 2011 and 2017

Year	Master's			Doctoral		
	Completion	Dropout	Continue	Completion	Dropout	Continue
2011	15%	17%	69%	12%	14%	74%
2012	15%	32%	52%	9%	26%	65%
2013	20%	34%	47%	8%	23%	69%
2014	20%	45%	35%	14%	30%	55%
2015	26%	44%	30%	21%	25%	54%
2016	13%	45%	42%	6%	36%	58%
2017	18%	36%	46%	26%	17%	57%

Source: Mphekgwana et al. (2020, p. 16213)

Figure 3 outlines the statistics from the Department of Higher Education and Training (DHET) of graduates at different levels of education in South Africa. The figure illustrates the low rate of successful participation in Doctoral level research in the South African public higher education sector.

Figure 3:   Graduation statistics between 2009 and 2019 in South Africa

	Undergraduate Degrees	Undergraduate Certificates and Diplomas	Postgraduate, Below Master's Level	Master's Degrees	Doctoral Degrees	Advanced Diploma and Postgraduate Certificate in Education
2009	57 191	52 152	26 591	8 112	1 380	0
2010	61 301	51 884	30 088	8 633	1 421	0
2011	64 551	53 012	31 801	9 690	1 576	0
2012	70 742	49 654	33 385	10 334	1 879	0
2013	79 136	50 913	37 836	10 809	2 051	77
2014	82 856	50 515	37 748	11 627	2 258	369
2015	87 717	51 388	36 584	11 936	2 530	1 369
2016	93 915	53 289	38 004	12 862	2 797	2 209
2017	96 120	55 426	40 376	12 951	3 057	3 001
2018	100 740	62 019	43 190	13 887	3 344	4 008
2019	102 387	56 906	39 137	13 519	3 445	6 548

Source: DHET (2021, p. 20)

Teferra (2020, p. 240 - 242) details that the private higher education sector contributes 0.2% of Doctoral students in South Africa. Furthermore, he argues that historically, the largest producers of doctorates are the privileged universities in South Africa. The historically advantaged universities are defined as those universities that were reserved mainly

for white students during the South African apartheid regime. Most of the doctorates in the Science, Technology, Engineering and Mathematics (STEM) areas produced in South Africa in 2017 were produced by these historically advantaged universities, with the previously black universities adhering to the call to produce more PhDs in the fields of the soft or applied sciences. Notably, Teferra (2020, p. 242) believes that this contributes to the preserving of the historical divide in the South African higher education system.

He also discusses the National Goals to produce 12000 graduates by 2019 and the critique of this goal by Universities South Africa (USAf) of the unrealistic goals and objectives including the lack of recognition of challenges limiting this achievement. An example of this is the low supervisory capacity rates in the South African higher education sector.

At a continental level, Khodabocus (2016, p. 26) discusses the results of a study focusing on Doctoral enrolment at select flagship universities in sub-Saharan Africa. The number of Doctoral graduates between the period of 2001 and 2014 reached 3538 with the University of Cape Town (UCT) producing the majority share of these graduates. Khodabocus (2016) also pinpoints the slow growth rate of Doctoral enrolments in the sub-Saharan African region and similar to Teferra (2020), attributes the slow growth rate in South Africa and broader Africa to the lack of supervisory capacity in the region, noting that in order to produce quality doctorates, adequate importance and emphasis must begiven to quality of supervision.

ANIE, DAAD and the British Council (2018) mirror the arguments regarding the low growth rate of Doctoral participation and graduation, stating that this has occurred against the backdrop of human and material resource challenges. Our World in Data (2021) shows the rate of spending on research and development as a share of GDP globally (Figure 5).

Spending on research and development as share of GDP, 2014
Expenditures for research and development are current and capital expenditures (both public and private) on
creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and
society, and the use of knowledge for new applications. R&D covers basic research, applied research, and
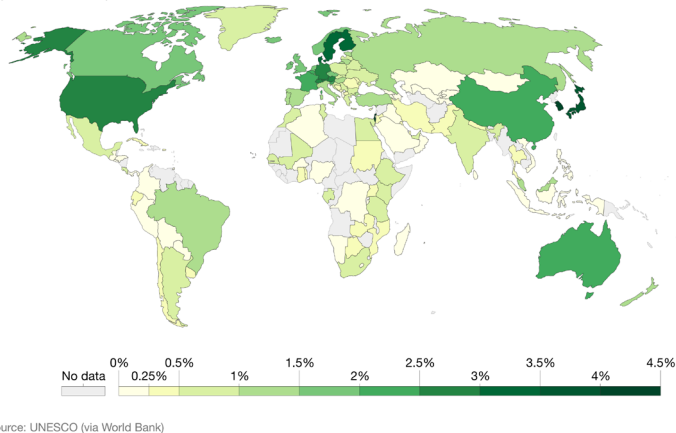experimental development.

Source: UNESCO (via World Bank)   CC BY

Figure 4:   Expenditure on research and development as share
of GDP
Source: Our World in Data (2021).

2.3   Research and Internationalisation

This chapter is premised on the belief that in the African
context, a university's comprehensive internationalisation
strategy can be advanced by the university's commitment to
a more tangible involvement in intra-African collaborative
postgraduate research. The previous section of this chapter
presented the statistics of students, particularly at a Doctoral
level in the South African higher education system. In addition,
we have attempted to present statistics of students at a
Doctoral level at a continental level. The following section aims
to contextualise this information in the internationalisation
of higher education. Concomitantly, postgraduate research
as a strategy to advance internationalisation in general and
internationalisation of research in particular, will also be
discussed. The role of higher education internationalisation in
developing a collaborative research culture across Africa will
also be explored.

Hénard, Diamond and Roseveare (2012, p. 15) highlight the Early Researcher Awards (ERA) programme provided by the Ministry of Economic Development and Innovation supporting innovation to increase a knowledge-based economy. This programme is used as a benchmarking example for its inclusion of students in research teams led by early career researchers. Also highlighted as a strategy for internationalisation through postgraduate studies is the practice of joint degrees that allows for enhanced perspectives within the post-graduate curriculum and increased opportunities to collaborate (Hénard, Diamond and Roseveare, 2012, p. 19). Similarly, Uwizeye et al. (2020, p. 1) have highlighted the Consortium for Advanced Research Training in Africa (CARTA) programme which promotes international collaboration between PhD fellows, arguing for this approach to respond to the requirement of Africa for well trained and networked researchers, capable of responding to challenges on the continent. Furthermore, they (2020, p. 1) argue that in addition to international collaboration, interdisciplinary collaborative research is essential for public and population health and could lead to high scholarly productivity through the contribution of various skills and experiences, thereby enriching the quality of research.

We have covered the benefit of international research collaboration which includes increased supervisory capacity; however, there are further motivations for international research collaboration and for universities to internationalise their research programmes and activities. In the context of "big science", Chen, Zhang and Fu (2019, p. 149) define international research as collaboration between individuals, groups, departments, institutions, regions and countries. This is further unpacked by Cahill (2015, p. 9), who argues the way in which this can occur is through a top-down policy, or through bottom-up researcher-led initiatives. The collaborations may also vary in scale, intensity and duration and can vary in effect and impact through complex networks of systems and relations. Somasundaram (2019) further advocates for international research collaboration, arguing

that it allows for increased perspectives on the research problem when collaboration occurs between researchers in different institutions located between different countries.

Science is an increasingly global enterprise and international collaboration is seen to be crucial to addressing global challenges. More countries are placing importance on science and technology collaboration to foster and maintain their global innovation competitiveness. The geographic, linguistic, political and cultural contributing characteristics of international research collaboration distinguish it from domestic collaboration. These reasons have been cited by Allen (2017), Jowi, Knight and Sehoole (2013, p. 17) and Onyancha (2011) as reasons for pursuing international research collaboration.

Despite these advantages, Pouris and Ho (2013, p. 90) argue against international research collaboration due to concerns that spending time on international cooperation is not always beneficial to the paying country. Furthermore, they assert that critical technologies and key knowledge for competitiveness are given away to competitors. Another concern they present is that collaborative agreements advocate strategic or political ends rather than the interests of science and technology. Similarly, Fransman, Hayman and Newman (2018) stress that while the rhetoric of partnerships sounds good, in reality it can be quite challenging and unequal. In many cases of global North–South partnerships, Northern partners hold a considerable amount of power compared to their Southern partners.

Despite these concerns, the benefits and motivations outweigh the risks associated with international research collaboration. Cheruvelil et al. (2014, p. 32) promote international research collaboration for the benefits that include diversity which increases team productivity and the quality of end products. Added benefits also include sharing of knowledge though combined perspectives and thus solving complex issues in an interdisciplinary framework.

This position is shared by Wai-Chan (2017, p. 61) who argues that collaboration allows researchers to access resources beyond their own, especially funding, talent, and equipment to develop innovative interventions for managing complex challenges. He further explains that collaboration also enables leverage and allows researchers to magnify the benefits of their own inputs and maximise their own outputs and outcomes. In addition, global and inter-regional research collaboration may help to overcome fragmentation and lack of critical mass in research investment. Moreover, Cheruvelil et al. (2014, p. 31) argue further for international research collaborative teams, highlighting the necessary and desirable contribution they make, resulting in important research outcomes far beyond what could be accomplished by individuals working independently. To paraphrase, when collaborations are successful, the outcomes surpass any one individual's accomplishments with collaborations referred to as "high performing cooperative groups." Wai-Chan (2017, p. 61) presents further motivation for international research collaboration, arguing that it is a critical component on the international outlook indicator, accounting for 2.5% of the ranking formula used by the Times Higher Education (THE) in the annual World University Rankings.

Limitations are outlined by Haylor et al. (2015, p. 10), who describe the challenges experienced in finding collaborative partners for international research collaboration. They state that close proximity has historically been known to promote collaboration. However, they also argue that in the context of virtual reality and the current context of the COVID-19 pandemic, progress has been made in international virtual engagement. As a result, this challenge may be decreasing, thus allowing for enhanced opportunities to find international research partners to work with.

Kolm et al., (2021, p. 1) add that virtual teamwork was on the rise even before the present crisis because this allows teams to work more flexibly and with less travel required. Rodney-Gumede (2020) notes that the pandemic has enhanced virtual collaboration and argues virtual mobility through research

collaborations can now complement physical engagements and mobility especially where funding limitations come into play. Kolm et al. (2021, p. 1) however, also acknowledge that in some cases there is a lack of competency to use the virtual space resulting in reduced team commitment and lower performance. Furthermore, in Africa, the digital divide poses challenges for this type of collaboration as well. Figure 6 details that the cost of data can cost up to $50.00 per gigabyte in some parts of the continent.

Figure 5: The costs of data in Africa
Source: Titilola Oludimu (2019)

Virtual mobility does, however, pose opportunities to increase international research collaboration. Henderikx (2018) lists reasons for institutions to pursue a blended approach including the following:

· Integrating resources, international research and innovation through open educational resources, open access journals or virtual laboratories.
· The opportunity to organise collaborative learning through learning communities.
· The opportunity to deliver international education through blended joint qualifications.

Henderikx (2018) further argues that international learning communities created through virtual mobility are a particular asset in international education due to the benefits of enhanced international staff skills and knowledge such as systematic observations and non-published material as well as access to international resources.

International research collaboration and internationalisation of research could contribute to the increase in participation from students on the continent in higher degrees. Through a phenomenological explorative approach, we have included an account of the experience of the PhD process. Smith (2013) presents phenomenology as studying the structure of various types of experience including perception, thought, memory, imagination, emotion, desire, volition to bodily awareness, embodied action, and social activity including linguistic activity. The subjective experience of everyday life as an analysis refrains from common sense assumptions or interpretations of everyday reality (Berger & Luckmann, 1966: 18). In this way, the challenge in the previous discussion is supported through the reality of a PhD researcher and the supervisors.

This includes the challenges in relation to methodological processes and how these were overcome through contextualisation and modification of the methodology to ensure progress of the research. Furthermore, the researchers hope to use the lessons learned to inform knowledge on facilitators, which could contribute to the success of higher degrees in the developing world and in Africa in particular.

The PhD research process referred to above aims to understand the structural dynamics of intra-African academic collaborative research teams. Necessary for this understanding was collecting data from role-players integral in intra-African research partnerships and the research projects thereafter. This data collection process proved to be challenging, as explained below.

This researcher in conducting research in the pursuit of her PhD degree through studying the higher education sector in South Africa, had discovered that information or data storage within the South African higher education sector proved to be a challenge. Using a multiphase data collection method of purposive sampling for data collection, the researcher assumed that information needed for data collection was collated and stored within specific directorates and departments within higher education institutions in South Africa. The assumption was based on the researcher's professional experience within the sector, having worked at a few higher education institutions over the span of 14 years. In commencing the data collection, the researcher soon realised that the information required was, in some cases, not collated and not stored in the directorates as initially assumed.

A second challenge experienced by the researcher was having to apply for ethical clearance or gatekeeper permission at each data collection site since the sites included other higher education institutions within South Africa. This challenge was compounded by the fact that each of these protocols was unique and required separate research ethics proposals. In total, 11 proposals were submitted with ethical clearance granted for each site, allowing access to all indented data collection sites. However, the process was more complicated than initially anticipated by the researcher.

Further to this, in the pursuit of research ethical clearance or gatekeeper permission at each of these sites, each research ethics committee proved to have different and unique interpretations of the studies' research protocols. Specifically, in the use of snowball sampling as part of the data collection method, as well as the impact of the now implemented Protection of Personal Information Act (POPIA) on research and data collection in South Africa, the researcher was required to modify the research protocol and data collection methods because of this.

In addition to these challenges, as data collection was operationalised through online semi-structured interviews,

in some cases, the data collection proved to be a greater challenge. This resulted in the length of time needed to collect data for this study having to be extended. Instead of over the period of three months as initially intended, the data collection spanned a period of six months. This was further compounded by the overwhelming workload of the research participants, resulting in many of them not being available, and the researcher having to follow up and wait for participants and available time, to administer the research instruments.

The researcher also experienced personal challenges throughout this process that further impacted the pursuit of her PhD degree. This included contracting COVID-19 and dealing with the political unrest that took place in KwaZulu-Natal in July of 2021. These challenges were further compounded by the overarching issue of work-life balance, and the pursuit of a further degree that already served as an overwhelming task for the researcher.

2.4 A PhD student's account of pursuing a higher degree in the developing world

The following section details the ways in which the PhD student and her research supervisors were able to overcome the challenges outlined above. In dealing with the challenge of locating where information or data is found within the South African institutions qualifying as research sites for the study, the researcher realised that various institutions had different ways of collating information and storing the specific data needed. To understand the nature and extent of intra-African academic collaboration at each of the selected institutions, the researcher, through bias developed via experience gained in the sector, assumed that the information would reside in the directorates of internationalisation or research and that they would be accessed through purposive sampling. However, when attempting this in the first phase of the data collection, the researcher realised that these directorates were aware of the areas in which intra-African research collaboration was happening, but these directorates or units did not necessarily form part of the academic staff involved or assume the lead

in any of the research teams. Therefore, the information regarding the leadership of intra-African research teams required for this study was not accessible through this method.

To overcome this challenge, the researcher added an extra step to the data collection process which entailed liaison with the HODs of academic departments and research centres. While extending the data collection timeline, this step did assist the researcher in reaching sampling saturation. Around 900 initial emails, with three follow up emails (totalling 2700) were sent to all academic department and research centre HODs, who were accessed via the websites of selected institutions. Where this was not available, the researcher made direct contact with Deans, Deputy Deans, or Deputy Vice-Chancellors responsible for internationalisation and/ or research, within their respective institutions.

The challenge of dealing with the implications of POPIA in research and data collection was more complicated. Initially, the sampling method for this study included snowball sampling aimed at reaching population saturation. However, when applying for gatekeeper or ethics clearance at each data collection site, the researcher was informed by many of the institutions that snowball sampling was not permitted as a method of data collection because university staff were not permitted to share contact details of colleagues. To overcome this challenge, the research protocol was modified and on the advice of the research supervisors, other ways in which snowball sampling could be used to achieve saturation were attempted. As a result, a modified version of snowball sampling, referral sampling (Cunningham, 2021) was applied. This entailed sharing the invitation letter to participate in the research with interviewees and asking them to share with colleagues. One limitation of this approach is that the researcher has no control over whether this letter is disseminated or not. However, in trying to ensure that this method was applied, the researcher followed up the initial request, in writing, until confirmation of this was received from the interviewee. In some cases, the researcher did not receive this confirmation, as the interviewee did not reply

to follow ups. This impacts the assurance of population saturation for the study.

The challenge of technology experienced while attempting to collect data for this research could not be mitigated at all. Issues of limited data, bandwidth, as well as electricity load shedding contributed to the challenge. These challenges had to be overcome through delaying interviews or scheduling shorter meetings over additional days to ensure the full administration of the research instrument. Exploring different platforms to overcome the challenge of bandwidth also assisted with this, with the researcher conducting telephonic interviews with some interviewees, instead of the online virtual meetings that were initially planned. Using the smartphone speakerphone functionality while recording the meeting is one way of overcoming this challenge. This proved to be the one challenge that delayed and extended the data collection timeline of the study more than any of the other challenges. Alongside this was the workload of academic staff or researchers and the participants not having adequate time in their diaries to participate until two to three months after the initial enquiry. Overcoming this challenge required both patience and persistence from the researcher in scheduling these interviews.

Finally, the personal challenges that were experienced and overcome were the researcher contracting COVID-19 and still having to collect data during this personal health crisis. In addition, the data collection period also coincided with the political unrest that took place in KwaZulu-Natal in July of 2021. The researcher was directly affected by this with violent protests taking place in her area of residence. However, to avoid rescheduling of interviews and possibly missing the opportunity to include participants because of participant workload or technological challenges, the researcher forged ahead and administered the instruments, despite these challenges.

The researcher found that through sheer persistence and resilience, she was able to make progress in pursuit of a PhD in

South Africa and complete the data collection process in 2021. Even though the intended timeline for the original submission of the thesis at the end of 2021 was delayed, the researcher, through the support and motivation of her supervisors, persevered through these challenges and is now aiming to analyse data collected for this study.

3.   Conclusion

This chapter has highlighted key strategies for the development of an inclusive research culture through postgraduate studies and research skills development at higher education institutions. This includes international research collaboration and as outlined by Tuhiwani Smith (1999) and Tiovonen (2021), internationalisation that enables the development of continental and global strategic alliances that encourage new ways of co-creational collaboration equally including cultural and contextual perspectives in solving global challenges.

Further to this, the chapter has highlighted the contextual challenges of pursuing research in the developing world and particularly, on the African continent. For this reason, there is a need to understand and engage in Africa-centric methodologies for more contextual methodologies and enhanced impactful research on the continent and in the developing world.

The chapter has also explored the importance of internationalisation of research through international research collaboration. These concepts highlight the need for mechanisms, policies and procedures that provide for the bridging of the North-South divide and greater integration of institutions in Africa. Fosci et al. (2019, p. V) advocate for enhanced research management capacity in lower- and middle-income country (LMIC) universities. They argue that the current limitations affect researchers' abilities to obtain research funding. Further to this, they highlight the need for capacity in institutions not only to identify funding opportunities, but also to administratively manage research

projects, including those that are collaborative in nature. They add that common areas in need within LMICs are financial management, grants management and monitoring and evaluation activities of research.

As a proposed solution to the identified gaps, Cunningham (2016) has suggested increased coordination between international and research offices at higher education institutions in the global South, which could result in the increased capacity needed for these objectives. Cunningham has been made suggestions for the rethinking and restructuring of international and research departments at universities, which include enhanced integration of the two. He proposes that the "new international office" should be embedded in the project and research mission of the university.

As a suggestion for a way forward, we recommend further research into facilitators of intra-Africa postgraduate collaboration. As discussed earlier, collaboration enhances research quality. Capacity building for research collaboration may result in developmental advantages for the continent.

References

Allen, L. (2017). What Value Collaboration? In: *The Connected Culture of Collaboration: A Selection of Analyses and Articles about Collaborative Scholarly Writing*, pp.6–8. [online] Digital Science,. Available at: https://doi.org/10.6084/m9.figshare.4702642.

Amarante, V., Burger, R., Chelwa, G., Cockburn, J., Kassouf, A., McKay, A. and Zurbrigg, J. (2021). Under-representation of developing country researchers in development research. *Applied Economics Letters*, [online] pp.1–6. Available at: https://www.tandfonline.com/doi/epub/10.1080/13504851.2021.1965528?needAccess=true [Accessed 6 March 2022].

ANIE, DAAD and British Council. (2018). Building PhD Capacity in Sub-Saharan Africa. [online] *British Council.* Available at: https://www.britishcouncil.org/sites/default/files/ h233_07_synthesis_report_final_web .pdf [Accessed 13 March 2022].

Appiah, E.K., Arko-Achemfuor, A. and Adeyeye, O.P. (2018). Appreciation of diversity and inclusion in Sub-Sahara Africa: The socioeconomic implications. *Cogent Social Sciences*, [online] 4(1). https://doi.org/10.1080/23311886.2 018.1521058

ASSAF. (2022). *The PhD Study: An Evidence-Based Study on How to Meet the Demands for High-Level Skills in an Emerging Economy.* [online] Pretoria: Academy of Science in South Africa. Available at: http://hdl.handle.net/20.500.11911/34 [Accessed 13 March 2022].

Beaudry, C., Mouton, J. and Prozesky, H. (2018). *The next generation of scientists in Africa.* African Minds. https://doi. org/10.47622/978-1-928331-93-3

Berger, P. L., & Luckmann, T. (1966). *The Social Construction of Reality.* http://perflensburg.se/Berger%20social-construction-of-reality.pdf

Brothwell, E. (2015). *Top 30 African universities: Times Higher Education reveals snapshot university ranking.* [online] Times Higher Education (THE). Available at: https:// www.timeshighereducation.com/news/top-30-african-universities-times-higher-education-reveals-snapshot-university-ranking [Accessed 13 March 2022].

Cahill, T. (2015). *Measuring the Value of International Research Collaboration.* Report Prepared for the Department Of Industry and Science, Australian Academy of Humanities. [online] Available at: https://www.humanities.org. au/wp-content/uploads/2017/04/AAH_Measuring-Value-2015.pdf [Accessed 7 March 2021].

Chen, K., Zhang, Y. and Fu, X. (2019). International research collaboration: An emerging domain of innovation studies? *Research Policy*, [online] *48*(1), pp.149–168. Available at: https://bit.ly/43LS9KE [Accessed 7 March 2021].

Cheruvelil, K.S., Soranno, P.A., Weathers, K.C., Hanson, P.C., Goring, S.J., Filstrup, C.T. and Read, E.K. (2014). Creating and maintaining high-performing collaborative research teams: the importance of diversity and interpersonal skills. *Frontiers in Ecology and the Environment*, *12*(1), pp.31–38. https://doi.org/10.1890/130001

Cloete, N., Sheppard, C., and Bailey, T. (2015). *South Africa as a PhD hub for Africa?* [online] ResearchGate. Available at: https://www.researchgate.net/publication/313050950_South_Africa_as_a_PhD_hub_for_Africa [Accessed 13 March 2022].

Confraria, Hu. (2019). Developing scientific capacity in the Global South. *Maastricht University*. [online] Available at: https://cris.maastrichtuniversity.nl/ws/portalfiles/portal/33804080/c6365.pdf. [Accessed...].

Connell, R. (2017). Southern theory and world universities. *Higher Education Research & Development*, [online] 36(1), pp.4–15. https://doi.org/10.1080/07294360.2017.1252311

Continental Education Strategy for Africa. (2016). *African Union*. Available at: https://au.int/sites/default/files/documents/29958-doc-cesa_-_english-v9.pdf. [Accessed...].

Cunningham, P. (2016). *Internationalisation of Higher Education Policy Consideration.* Lechec (Internationalisation of Higher Education in Colombia).

Cunningham, P. (2021). *Referral Sampling.* Personal Communication [Email].

Department of Higher Education (DHET). (2020). *Fact Sheet: Are we producing enough doctoral graduates in our universities.* [online] *Department of Higher Education and Training*, Pretoria: Department of Higher Education and Training, pp.1–7. Available at: https://www.dhet.gov.za/ Planning%20Monitoring%20and%20Evaluation%20 Coordination/Are%20we%20producing%20enough%20 Doctoral%20graduates%20in%20our%20Universities. docx%20(1).pdf [Accessed 12 March 2022].

Department of Higher Education (DHET). (2021). *Statistics on Post-School Education and Training in South Africa.* [online] *Department of Higher Education and Training*, Pretoria: Department of Higher Education and Training, pp.9–25. Available at: https://www.dhet.gov.za/ DHET%20Statistics%20Publication/Statistics%20on%20 PostSchool%20Education%20and%20Training%20 in%20South%20Africa%202019.pdf [Accessed 12 March 2022].

Fosci, M., Loffreda, L., Veltan, L., & Johnson, R. (2019). Research Capacity Strengthening in LMICs. In *UK Department for International Development.* UK Department for International Development. https://assets.publishing. service.gov.uk/media/5d42be4eed915d09d8945db9/ REA_Research_Capacity_Strengthening_in_LMICs_ FINAL_June_2019.pdf

Fransman, J., Hayman, R., & Newman, K. (2018, October 30). *Applying8 principles for fair and inclusive research partnershps.* Bond. https://www.bond.org.uk/ news/2018/10/applying-8-principles-for-fair-and-inclusive-research-partnerships

Haylor, G., Porter, B., Ghezae, N. and Savage, W. (2015). *Investigating Costs and Benefits of Collaborative Research.* [online] International Foundation for Science, pp.1–24. Available at: http://www.ifs.se/IFS/Investigating%20 the%20costs%20and%20benefits%20of%20 collaboration.pdf [Accessed 7 March 2021].

Hénard, F., Diamond, L. and Roseveare, D. (2012). Approaches to Internationalisation and Their Implications for Strategic Management and Institutional Practice. [online] OECD. In *The Organisation for Economic Co-operation and Development,* pp.1–51. Available at: https://www.oecd.org/education/imhe/Approaches%20to%20internationalisation%20-%20final%20-%20web.pdf [Accessed 18 March 2022].

Henderikx, P. (2018). International Collaboration and Virtual Mobility. In: *Improving Quality in Legal Studies,* pp.1 - 42. [online] Edelnet. Available at: https://blog.fernuni-hagen.de/edelnet/wp-content/uploads/2018/08/hendrikx.pdf [Accessed 11 March 2022].

Jowi, J., Knight, J. and Sehoole, C. (2013). Internationalisation of African Higher Education: Status, Challenges and Issues. In: J. Knight and C. Sehoole, eds., *Internationalisation of African Higher Education* pp.1–44. [online] Rotterdam: Brill I Sense. https://doi.org/10.1007/978-94-6209-311-9_2

Kariuki, T. (2015). Africa produces just 1.1% of global scientific knowledge - but change is coming. [online] *The Guardian.* Available at: https://www.theguardian.com/global-development-professionals-network/2015/oct/26/africa-produces-just-11-of-global-scientific-knowledge [Accessed 30 March 2022].

Khodabocus, F. (2016). Challenges to Doctoral Education in Africa. *International Higher Education*, (85), pp.25–27. https://doi.org/10.6017/ihe.2016.85.9246

Kolm, A., de Nooijer, J., Vanherle, K., Werkman, A., Wewerka-Kreimel, D., Rachman-Elbaum, S. and van Merriënboer, J.J.G. (2021). International Online Collaboration Competencies in Higher Education Students: A Systematic Review. *Journal of Studies in International Education*, [online] p.102831532110162. https://doi.org/10.1177/10283153211016272

Kyle, W.C. (2020). Expanding our views of science education to address sustainable development, empowerment, and social transformation. *Disciplinary and Interdisciplinary Science Education Research*, [online] 2(1) pp.1 – 9. https://doi.org/10.1186/s43031-019-0018-5

Kyobutungi, C., Okiro, E., Fredros O., Ifeyinwa A., Midega, J. and Ngozi E. (2021). African countries must muscle up their support and fill massive R&D gap. [online] *The Conversation*. Available at: https://theconversation.com/african-countries-must-muscle-up-their-support-and-fill-massive-randd-gap-161024 [Accessed 31 March 2022].

Luc (2021). *Brief Analysis of the Presence of African Universities in the Shanghai Ranking 2020*. [online] Afriscitech.com. Available at: https://www.afriscitech.com/en/scientists/networks/african-physics-newsletter/1275-brief-analysis-of-the-presence-of-african-universities-in-the-shanghai-ranking-2020 [Accessed 13 March 2022].

Lupu, N. and Michelitch, K. (2018). Advances in Survey Methods for the Developing World. [online] *Annual Review of Political Science*. Available at: https://www.annualreviews.org/doi/10.1146/annurev-polisci-052115-021432 [Accessed 5 November 2021].

Makoni, M. (2017). *University research collaboration is key to meeting SDGs*. University World News. https://www.universityworldnews.com/post.php?story=20170206184302712

Momtazmanesh, S., Saghazadeh, A., Becerra, J.C.A., Aramesh, K., Barba, F.J., Bella, F., Blakney, A., Capaccioli, M., Castagna, R., Crisanti, U., Davtyan, T., Dorigo, T., Ealy, J., Farokhnia, M., Grancini, G., Gupta, M., Harbi, A., Krysztofiak, W., Kulasinghe, A. and Lam, C.-M. (2021). International Scientific Collaboration Is Needed to Bridge Science to Society: USERN2020 Consensus Statement. *SN Comprehensive Clinical Medicine*, [online] 3(8), pp.1699–1703. https://doi.org/10.1007/s42399-021-00896-2

Mouton, J. (2011). Doctoral production in South Africa: Statistics, challenges and responses. *Perspectives in Education*, [online] *29*(3), pp.13–29. Available at: https://www.ajol.info/index.php/pie/article/view/76971 [Accessed 10 March 2022].

Mphekgwana, P.M., Mabila, T.E., Tirivangasi, H.M. and Makgopa, H.M. (2020). Analysis of survival rates among postgraduate students at a historically disadvantaged university in South Africa. *Gender and Behaviour*, [online] *18*(3), pp.16208–16221. Available at: https://www.ajol.info/index.php/gab/article/view/203333 [Accessed 13 March 2022].

Mwelwa, J., Boulton, G., Wafula, J.M. and Loucoubar, C. (2020). Developing Open Science in Africa: Barriers, Solutions and Opportunities. *Data Science Journal*, [online] *19*(1), p.31. https://doi.org/10.5334/dsj-2020-031

Naveen Z. M. (2021). Revisiting: Challenges for Academics in the Global South — Resource Constraints, Institutional Issues, and Infrastructural Problems. [online] *The Scholarly Kitchen.* Available at: https://scholarlykitchen.sspnet.org/2021/05/10/revisiting-challenges-for-academics-in-the-global-South-resource-constraints-institutional-issues-and-infrastructural-problems/ [Accessed 23 November 2021].

Onyancha, O. (2011). Research Collaborations between South Africa and Other Countries, 1986-2005: An Informetric Analysis. *African Journal of. Library & Information. Science*, [online] *21*(2), pp.99–112. Available at: https://core.ac.uk/download/pdf/43168144.pdf.

Our World in Data. (2014). *Spending on research and development as share of GDP.* [online] Available at: https://ourworldindata.org/grapher/research-and-development-expenditure-of-gdp [Accessed 6 February 2022].

Our World in Data. (2021). *Researchers in R&D per million, 2015.* [online]. Available at: https://ourworldindata.org/grapher/researchers-in-rd-per-million-people [Accessed 7 July 2021].

Pouris, A. and Ho, Y.-S. (2013). Research emphasis and collaboration in Africa. *Scientometrics*, [online] 98(3), pp.2169–2184. https://doi.org/10.1007/s11192-013-1156-8

Rodny-Gumede, Y. (2020). Virtual World Left Out of Policy on Universities' International Collaboration. [online] *Mail and Guardian.* Available at: https://mg.co.za/opinion/2020-11-22-virtual-world-left-out-of-policy-on-universities-international-collaboration/ [Accessed 22 March 2021].

Sehoole, C. and De Wit, H. (2014). The Regionalisation, Internationalisation, and Globalisation of African Higher Education. *International Journal of African Higher Education*, *1*(1), pp.217–241. https://doi.org/10.6017/ijahe.v1i1.5648

Smith, D. W. (2013). *Phenomenology (Stanford Encyclopedia of Philosophy).* Stanford.edu. https://plato.stanford.edu/entries/phenomenology/

Somasundaram R. (2019, August 18). *6 Types of Research Collaboration–Every Researcher Should Know | iLovePhD.* ILovePhD; iLovePhD. https://www.ilovephd.com/6-types-of-research-collaboration-every-researcher-should-know/

Teferra, D. (2020). Imperatives and Realities of Doctoral Education in South Africa. In: *Trends and Issues in Doctoral Education: A Global Perspective* pp.238–264. [online] Sage Publications. https://doi.org/10.4135/9789353885991.n10

Tijssen, R. and Kraemer-Mbula, E. (2017). Research excellence in Africa: Policies, perceptions, and performance. *Science and Public Policy*, [online] 45(3), pp.392–403. https://doi.org/10.1093/scipol/scx074

Titilola O. (2019). How much does mobile data cost in
        Africa? [online] *Techpoint Africa.* Available at: https://
        techpoint.africa/2019/05/01/mobile-data-cost-africa/
        [Accessed 18 March 2022].

Toivonen, J. (2021). *Rethinking Global South Collaboration in
        Research, Innovation and Education – Research Funding
        Now!* [online] Blogit.utu.fi. Available at: https://blogit.utu.
        fi/researchfundingnow/2021/09/27/rethinking-global–
        South-collaboration-in-research-innovation-and-
        education/ [Accessed 6 March 2022].

Tuhiwai Smith, L. (1999). *Decolonizing Methodologies: Research
        and Indigenous Peoples.* [online] Zed Books. Available
        at: https://nycstandswithstandingrock.files.wordpress.
        com/2016/10/linda-tuhiwai-smith-decolonizing-
        methodologies-research-and-indigenous-peoples.pdf.
        [Accessed..].

Uwizeye, D., Karimi, F., Otukpa, E., Ngware, M.W., Wao,
        H., Igumbor, J.O. and Fonn, S. (2020). Increasing
        collaborative research output between early-career
        health researchers in Africa: lessons from the CARTA
        fellowship programme. *Global Health Action*, [online]
        13(1), p.1768795. https://doi.org/10.1080/16549716.2020.
        1768795

Wai-Chan, S. (2017). International research collaboration creates
        higher impact. *Nordic Journal of Nursing Research*, *37*(2),
        pp.59–60. https://doi.org/10.1177/2057158517706259

Chapter 6

Internationalisation or Not We Move: Perspective from an Outsider

Kehdinga George Fomunyam
Durban University of Technology

Abstract

Internationalisation of higher education is a highly contested subject or subdiscipline within the field of higher education and there are many voices articulating varied opinions on several issues on the topic. Like most subjects in the global higher education sphere, Africa is often made an unwilling participant or a participant by omission. Such situations have led to attempts to reconfigure the meaning of internationalisation from different spheres and what should constitute internationalisation. One of these attempts at Higher Education Forum on Africa, Asia and Latin America 2019 sparked a series of engagements which would later result in several journal and newspaper articles. This chapter takes a look at some of the issues upon which these engagements were anchored in a bid to showcase the complexity of the subject and to show how difficult it is to reach, beyond reasonable doubt, a university-accepted definition or pathway for the subject. The chapter focuses on the fact that whether higher education initiatives constitute internationalisation or not, working towards responsiveness at all levels must be encouraged.

1. Introduction

The internationalisation of higher education has been a burning issue in the higher education sphere for over two decades now with every institution across the globe striving to be

international or to engage internationally one way or another. However, this drive hasn't been the easiest especially for universities in the global South who are constantly struggling with countless issues with respect to higher education. Philip Altbach, a renowned professor of higher education and former director of the Centre for International Higher Education at Boston College, defines internationalisation as "the specific policies and initiatives of countries and individual academic institutions or systems to deal with global trends" (P. Altbach, 2002, p. 6). He further articulates that example of internationalisation would include, though not be limited to, policies relating to how academic institutions collaborate with each other, the recruitment of foreign students, and the creation of oversees or branch campuses abroad. What is also noteworthy here, is the assertion by Altbach (2002, p. 6) that 'internationalisation is a major trend in higher education. It is also a worldwide phenomenon. And it is widely misunderstood'. This misconception or the debate about the misconception of internationalisation of higher education is still ongoing today and that is partly the focus of this chapter. Knight (2004, p. 11) on his part defines internationalisation as "an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education". This definition of internationalisation takes the discussion of internationalisation from a policy or operational perspective, which Altbach discussed, to purpose, function, and delivery of higher education from a global perspective. Ge (2022) argues that internationalisation places or should place emphasis on international collaboration and cooperation help higher education institutions cope with operationalities, pressures and their consequences (of the global dimension) as pertains to higher education, and it (internationalisation) should respect the individual situation of any given university and country. De Wit (2011) confirms this by adding that the extent of internationalisation in an institution can be measured by looking at indicators like the number of international students and staff in an institution, its use of English as the language of teaching and learning, international reputation, and international collaborations amongst others.

2. The business of Internationalisation

One of such collaborations is the Higher Education Forum on Africa, Asia, and Latin America (HEFAALA) championed by The International Network for Higher Education in Africa (INHEA) led by its founding director Professor Damtew Teferra. HEFAALA was launched in Durban, South Africa on the 20th of August 2016 with more than 60 delegates from 18 nations present. I was one of those delegates and this was a promising moment for cross-continental tertiary learning. INHEA has been in existence since 2003 and has led several internationalisation initiatives on the African continent. Building on the success of the first HEFAALA, INHEA championed HEFAALA II, themed 'Internationalisation of Higher Education in the New Era of World (Dis)Order' and this was held in July 2019 in Addis Ababa, Ethiopia. The second HEFAALA saw the delivery of two keynote addresses 'Internationalisation of Higher Education: Global Realities and Perspectives' by Prof. Hans de Wit, Director of the Centre for International Higher Education, Boston College, and 'The Climax of Globalization: The Endurance of Internationalisation', by Dr. Ebrima Sall, formerly the executive Secretary of CODESRIA, now Trust Africa, Dakar, Senegal (Teferra, 2020b). In his keynote address, Hans de Wit articulated an alternative definition of internationalisation propounded by (De Wit et al., 2015b). Speaking about this, Teferra (2020b, p. 160) posits that

> "De Wit further elaborated the definition at the Second Higher Education Forum for Africa, Asia and Latin America (HEFAALA) Conference in Addis Ababa, Ethiopia, in 2019 when delivering his keynote address. It was here that Teferra openly countered and subsequently engaged in vigorous debate and dialogue".

This engagement let to the publication of seven articles in the higher education magazine called University World News. The articles were; Defining internationalisation – Intention versus coercion, University World News 23 August 2019 (Damtew Teferra); We must end coercion in internationalisation

in Africa, University World News 07 September 2019 (Hans de Wit); Internationalisation – The search for a definition continues. 21 September 2019 (Damtew Teferra); Internationalisation – No such thing as a neutral definition. 02 October 2019 (Hans de Wit); In practice, internationalisation fails to be intentional. 17 October 2019 (Abebaw Yirga Adamu); Exploring emancipatory perspectives in internationalisation. 14 November 2019 (Teklu A Bekele); Internationalisation of higher education is not neutral. 08 February 2020 (Hanne Kirstine Adriansen). These conversations raise questions about the very understanding and nature of internationalisation, as well as the misunderstanding articulated by The definition in question which sparked the debate looks at internationalisation as 'the intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, in order to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society' (De Wit et al., 2015b, p. 29). This definition which De Wit (2020) posits as imperative for a more descriptive and normative direction to the process of internationalisation, is counted by Teferra (2020b) as neither descriptive nor normative, but rather prescriptive and curative.

The definition articulated by De Wit et al. (2015b) is a formulation of the widely used definition of the term articulated by Knight (2004). This reformulated definition propounds that internationalisation cannot be a goal in itself but should be a means to enhance the quality of education delivered to all students and or a means to serving a public purpose or a means to higher education serving as a public good. However, it is critical to firstly understand the nitty-gritty of the definition and what it presupposes with regards to internationalisation. Knight (2004, pp. 5-6) argues that

> "although it is encouraging to see the increased use and attention being given to internationalisation, there is a great deal of confusion about what it means. For some people, it means a series of international activities such as academic mobility for students and teachers;

international linkages, partnerships, and projects; and new, international academic programmes and research initiatives. For others, it means the delivery of education to other countries through new types of arrangements such as branch campuses or franchises using a variety of face-to-face and distance techniques. To many, it means the inclusion of an international, intercultural, and/or global dimension into the curriculum and teaching learning process. Still others see international development projects and, alternatively, the increasing emphasis on trade in higher education as internationalisation".

From the above, we understand that internationalisation means amongst other things academic mobility, projects, international linkages, international academic programmes and research initiatives, branch campuses or franchises, inclusion of an international, intercultural, and/or global dimension into the curriculum or into teaching and learning initiatives. Knight (2004) propounded on the key concepts in the definition of internationalisation like process, international, intercultural, and global dimension, integrating, purpose, function, and delivery. Process, she argues, deals with the nature of internationalisation as an ongoing project and not a product. It is evolutionary or developmental and speaks to the tri-part model to education—input, process, and output. The input, process, and output model demand that the particular priorities of a country, an institution, or a specific group of stakeholders be taken into consideration. With regards to international, intercultural, and global dimension, this speaks to the breadth of internationalisation. International consists of the workings between nations or cultures. Intercultural speaks to diversity in cultures existing within, institutions and countries. The global speaks to the scope of internationalisation is being worldwide. Integrating on its part focuses on the process of bringing in an international or intercultural dimension higher education or its processes ensure that the international dimension remains central, not marginal, and is sustainable. Purpose deals with the totality of roles and objectives or the mission and mandate of the university. Function ponders on the workings or primary

elements that necessitates higher education systems or individual institutions and lastly delivery refers to the offering of higher education programmes or courses both nationally and internationally. These key concepts are what makes the definition workable and speak to the multiple manifestations of internationalisation of higher education. Zeleza (2012) confirms this when he argues that academic positions and views on internationalisation differ widely in terms of its constituents, workings and the forces driving it, the values it creates or competencies it promotes, and the processes sustaining it.

Internationalisation therefore is a field difficult to define and even more difficult is the tasking of delineating what constitute or shouldn't constitute internationalisation. In previous decades internationalisation was theorised as consisting of the following activities, amongst others: student and staff exchange, internationalisation of the curriculum and of learning outcomes, and cross-border delivery of programmes, projects and institutions, virtual mobility, research cooperation, knowledge transfer and capacity building, mobility of and competition for students, teachers and scholars; export of academic systems and cultures, digital learning and collaborative online international learning (De Wit & Merkx, 2012; Knight, 2008; Knight & De Wit, 1997, 1999). While this list is not exhaustive, it is to a greater extend comprehensive and touches several key aspects of internationalisation. De Wit et al. (2015b) confirm this when they argue that two key dimensions of internationalisation have emerged: internationalisation abroad and internationalisation at home. Internationalisation abroad refers to all educational activities happening across the borders like mobility of projects, people, programmes, and providers amongst others. Internationalisation at home on the other hand deals with the making of educational more global and is often more curriculum-orientated and gears towards activities that develop international or global understanding and intercultural skills. Although internationalisation abroad can also involve these activities or be curriculum-related and

build a global or international understanding of intercultural skills, making a clear-cut distinction between the two is difficult or impossible. Writing about internationalisation and its workings on the African continent, Teferra (2014a) argues that the relevance of internationalisation in higher education cannot be over-emphasised, especially in this era of the knowledge economy, where research has grown in leaps and bounds on the African continent. This was made possible through the different elements of internationalisations such as student and staff mobility, regional and international networks, research initiatives, quality regimes (accreditation and ranking bodies), publication and communication (journals and databases), English as language of teaching and learning, curricular reform, and new forms of educational delivery. These amongst others therefore constitute the crux of internationalisation, whether it is internationalisation at home or abroad.

However, several voices are beginning to be raised on the westernised nature of internationalisation and the need for the globalisation of the phenomenon to make sure that all parts of the world are true key players and not just passive recipients. Speaking about this, Jones and De Wit (2014, p. 98) argue that

> "in the current global knowledge society, the concept of internationalisation of higher education has itself become globalized, demanding further consideration of its impact on policy and practice as more countries and types of institution around the world engage in the process. Internationalisation should no longer be considered in terms of a westernized, largely Anglo-Saxon, and predominantly English-speaking paradigm".

As such, a move away from the previously western-dominated culture will by and large impact on how internationalisation affects or influences higher education to be more responsive. Jones and De Wit (2014) conclude that there is a strong need to prioritise the enhancement of regionalisation and or South-South cooperation so as to move away from the 'copy and paste' syndrome which has seen the western paradigm, as well as the strong propensity to internationalise vertically,

implemented in most parts of the world. If a continent like Africa is to chart its own course on internationalisation, it will have to determine what would constitute internationalisation and how to go about it. For example, in the western paradigm, De Wit (2020, p. 33) argues that

> "mobility is still the most dominant factor in internationalisation policies worldwide, and increased attention is being paid to internationalisation of the curriculum at home. This phenomenon emerged at the end of the 1990s as a movement in Europe to reverse the focus on a small number of mobile exchange students".

While mobility for both students and staff are also important, the medium of instruction, curriculum internationalisation, Africa wide collaborations amongst other things are primary. De Wit (2020, p. 35) concludes that

> "internationalisation in the developing world has to avoid simply mimicking the priorities of Anglo-Western forms of this phenomenon and develop distinctive forms which better reflect local needs and priorities; in other words, moving away from coercion to defining intentionally own purposes".

If Africa is going to intentionally define its own purposes, approaches, and constructs for internationalisation, then it can't be told what constitutes or can't constitute internationalisation within its sphere by the global North. Teferra (2020b, pp. 160-161) on the other hand provides an alternative perspective when he argues that concur with this when he argues that:

> "HE in Africa is an international enterprise, ...even the most parochial HE institutions exhibit their international dimension in the language of instruction; the books, journals, and other published resources they consume; the methodologies they pursue; and/or the resources they deploy.... African HE is part of the larger global HE system, albeit a much smaller player. Its engagement at the international level is very limited in scope and without notable consequence. As the weakest

global HE system, it relies heavily on the discourses, paradigms and parameters set by others, rendering it vulnerable to global whims and idiosyncrasies. African HE assumes the position of the most internationalised system by being the least internationally engaged. Africa produces a fraction of the world's global knowledge—with the most generous statistics putting such contribution at 2%. The continent thus relies heavily on the knowledge produced by others. The rest of the Global South also falls into this unenviable category. In participating in the massive consumption of these products and services while staunchly, but helplessly, adhering to international academic and scholastic norms and values, universities in the Global South are often not willing parties. Neither is the process of their consumption wholly intentional".

From this perspective, African higher education is the most internationalised in the world not as a result of contribution but as a result of borrowing from all parts of the world to fill up the gaps in its knowledge economy especially because the continent only contributes about 2 percent of global knowledge. The process of Africanisation and decolonisation has attempted to resolve this in the higher education sector by articulating that even if there is a borrowing, there is need for a contextualising of the same to ensure the local context counts. Although there are alternative perspectives on the decolonisation of higher education in Africa and the way the decolonisation movement should unfold, making the foreign local is one thing most seem to agree on.

Ge (2022) indicated that several national policies focus on internationalisation as an export commodity. While some countries prioritise study abroad and scholarship schemes for its citizens, others focus on international students coming into the country. Some countries choose to include both. On another note, some countries engage in internationalisation with the primary objective of gaining a lead role in the global higher education landscape. Some other nations attempt to create a contextual and or comprehensive approach to supporting the growth of internationalisation initiatives in the local higher education arena, including internationalisation

abroad and at home. For some nations the focus is on strengthening regional scope and corporation, while others have specific programmes or projects which they use to encourage bilateral engagements with international partners in higher education for their universities and this is primarily done through 'soft power'. In some developing or emerging countries, the focus is on human capital development, while in others the promotion of foreign language education is key. On the African continent International Education Association of South Africa (2014) amongst others develop priority key areas for the internationalisation of higher education in Africa. This declaration which was signed by or in agreement with or with representatives from nine national, six regional and nine other organisations, with national, regional, and global responsibilities, affirmed that internationalisation should stimulate global learning for all by paying close attention to the curriculum, COIL, teacher education, and foreign language education. Secondly, it sought the integration of internationalisation initiatives with all action being taken to achieve the Sustainable Development Goals (SDGs). Thirdly, it demanded the development of an inclusive and social internationalisation approach which is ethical and not primarily concerned with revenue, soft power, and excellence. The declaration also prioritises the stimulation of foreign language, intercultural competence, and global citizenship education, as well as the integration of global, regional, national, and local dimensions to internationalisation initiatives. Adding to this, the internationalisation of the curriculum, with particular attention to new technologies and their usage, as well as the stimulation of carbon–neutral forms of mobility were to be prioritised. Besides internationalising the curriculum, the internationalisation of the student body to make the classroom a more diverse one was encouraged. Also, the stimulation and facilitation of involvement of disadvantaged groups like indigenous or ethnic groups, and academic mobility for refugees was to be at the heart of internationalisation initiatives. Furthermore, the strengthening of relationships between the internationalisation of K–12 and higher education

was highly encouraged. Lastly, the fight for a more wide-ranging approach to bringing together all the dimensions of internationalisation and the reduction of over-commercialisation of internationalisation were touted as key constructs for internationalisation on the continent.

3.   Internationalisation Pathway

We return to the definition of internationalisation by articulated by De Wit et al. (2015b) and rearticulated at HEFAALA 2019. As earlier articulated, the bone of contention in the new definition was the notion of intentionality and the function of internationalisation towards enhancing quality and making a meaningful contribution to society. Teferra (2020b) argued that internationalisation in the global South is far from international but is rather the most internationalised higher education system by reason of omission. Since both scholars and others have explored the reasons behind their arguments as to the intentionality or the lack thereof of internationalisation in Africa, my focus here is in what constitutes internationalisation and what does not by virtue of this new definition. From the definition of De Wit et al. (2015b), we can deduce that any attempt at internationalisation which is not intentional or which doesn't contribute to the quality of education and research and make a meaningful contribution in the society cannot be understood as internationalisation. On the other hand, Teferra (2020b) argued that internationalisation in the global South and Africa in particular is far from intentional but is the most internationalised by omission. The question of omission and intention are my focal points here. Teferra (2020b, p. 163) writing about the aspects of internationalisation argues that "key among them are mobility (student and academic), research (cooperation and partnerships), curriculum (delivery and methodology) and language (for instruction and publishing)". However, the very idea of mobility, whether student or staff, is by and large intentional. Academic mobility is an intentional process requiring careful planning and resources to ensure the same is successful. No student or staff member finds themself in

another country by mistake. Knight and De Wit (2018, p. 3) argue that in

> "the discourse and study of internationalisation, a great deal of attention has been paid to all modes of international academic mobility—people, programmes, providers, policies, and projects—but not enough has been paid to the internationalisation of graduate education and research, including international co-authorship and other international research benchmarks".

This intentional process aligns with the definition under discussion here. However, when mobility is inbound and not outbound, the intentionality on the part of Africa comes into question as Africa becomes a participant by omission, as argued by Teferra. The question of intentionality or not with regards to mobility becomes a difficult one to answer and ceases to be neutral, as with the definition provided by Knight. However, what contributions do such mobility make towards the quality of education and research or how does it make a meaningful contribution in the society? These are questions with relative answers and with the quality of education and research being highly debatable subjects, judging whether mobility of student and staff qualify as internationalisation depends on whether they contribute or fail to contribute to the quality of education and research, or make a meaningful contribution to the society. As such mobility of student or staff, whether outward or inward, can be considered to be internationalisation or not by virtue of the definition (Matola & Fomunyam, 2021). This is supported by Egron-Polak (2021) who argued that high numbers of international students (especially if from only one or two countries or if enrolled in only one or two disciplines) does not constitute internationalisation. It can also be argued that the same is true for staff. If student and staff mobility, which are considered important aspects of internationalisation, are touted as not being internationalisation, what would constitute internationalisation then becomes a grey area which is subjective in nature.

Furthermore, research that is both based in corporations and partnerships can also be questioned as to whether they can constitute internationalisation. Knight and De Wit (2018, p. 3) argue that

> "research has become more complex in recent years. It requires, and is distinguished by, more international collaboration than in the past, and it is increasingly competitive in nature. National and institutional needs to acquire academic talent are urgent and processes around issues such as the awarding of patents and knowledge transfer require more support than ever. Growth in international research funding, patents, publications, and citations requires the development of internationalised, or globalised, research teams. Bibliometric analysis yields evidence of increasing collaboration within the international scientific community".

It is certain that research as relates to corporations and partnerships are a vital part of internationalisation. However, Teferra (2020b) argues that Africa's knowledge contribution to the global knowledge economy can only be generously placed at 2 percent. Writing about this, he posits that 'Africa produces a fraction of the world's global knowledge—with the most generous statistics putting such contribution at 2%. The continent thus relies heavily on the knowledge produced by others' (160). The debatable nature of knowledge contribution and who determines what exactly constitutes knowledge contribute is highly debatable in this case. This aligns with another argument articulated by Teferra (2017) when he questions the veracity of rankings and measurements which seek to rank or measure African contributions. He states that after the rankings, "the 'rankers' go about their business, some with audacity, but too often without sufficient concern for veracity, authenticity or integrity in their methodologies and, especially in the case of Africa, without sufficient data" (Teferra, 2017, p. 18). The measurements of these same rankers can't be more valid about knowledge contribution than they are about rankings. Questioning these measurements

further, (for research is one of the criteria used in rankings) Teferra continues:

> "for the last three years, the University of Kwazulu-Natal in South Africa has been the first in the country in academic productivity, as measured by the Department of Higher Education and Training. The Department undertakes the task of ranking using parameters that meticulously measure research and academic outputs. Yet, according to the newly released QS ranking— which allocates 60 percent of the criteria to academic reputation—the University of Kwazulu-Natal now stands below six other South African universities. This points to a glaring tension between data and dubious assessment based on reputation" (Teferra, 2017, p. 18).

If the percentage contribution of Africa in the global knowledge sphere is questionable, with research being an intentional process (although Teferra debatably argues that in some cases it is far from intentional), it follows that such partnerships and corporations will constitute internationalisation. However, when this is considered against the backdrop of research enhancing the quality of education or making a meaningful to the society to constitute internationalisation, questions arise as to how this measurement would be done; whether locally or internationally and what criteria would be used to measure the same. These questions leave the process of internationalisation in muddy waters as knowing what constitutes internationalisation is proving increasing difficult.

A further look at language of instruction also presents serious challenges when looking at them in line with the new definition of internationalisation or when pitting it against the arguments advanced against the definition. The language of instruction which is largely English across Africa cannot be said to be intentional but is a consequence of colonisation. The other languages use for instruction on the continent like French, Portuguese, and Spanish, (but not Arabic or Afrikaans) can also be said to be colonial in nature. This is supported by Teferra (2020b, p. 161) who argues that

> "the choice of a language as a medium of academic and scholarly communication is a key aspect of internationalisation. Virtually all countries with a colonial history maintain the language of their colonialists for their academia and scholarship. This is not by choice (and thus not intentional) but de facto a consequence of history. In some countries which set out to change this burden of history, the process has been fraught with contestation—between those in favour and those against change. The push and pull for predominance in international and 'regional' languages—between Arabic and French (as in Tunisia), Arabic and English (as in the Sudan), and English and French (as in Algeria, Rwanda, and Senegal)—for the "soul" ... of academic space are instructive. Thus, the internationalisation phenomenon is not only intentional, but fraught with tension and contestation—and is therefore far from intentional".

The use of English as a medium of instruction here, or any other foreign language at that, is a byproduct of colonialism and a consequence of neo-colonialism, and according to Teferra constitutes internationalisation by omission and not participation. However, Egron-Polak (2021) argues that teaching in English in higher education institutions in non-English speaking countries cannot be considered internationalisation. From this perspective, it would be outrageous to consider the use of English as a medium of teaching and learning or any scholarly communication in an English-speaking country internationalisation. The same logic can be applied to the use of French, Spanish, Arabic, Portuguese, or Mandarin amongst others as the language of teaching and learning in countries where the language is not native. This debate as to whether the language of instruction can be considered internationalisation is further complicated by the construct of intentionality and contribution to quality and society.

The curriculum is another dimension of internationalisation. The internationalisation of the curriculum has been touted as having the potential to contribute effectively to the quality of educational experience for both students and staff in the teaching and learning

process. This is why the same has become predominant in the internationalisation policy for most countries (Fomunyam, 2019). This is supported by Knight (2021) who argues that curriculum internationalisation in recent times focuses on the creation of new programmes with international themes, the infusion of international, cultural, global or comparative dimensions into existing courses, foreign language study, area or regional studies and joint or double degrees as ways of improving the educational experience. According to Teferra (2020b) the internationalisation of the curriculum can be understood as the orientation of content and form to be international so as to prepare students, whether domestic or foreign, to function or perform both socially and professionally in a multicultural and or international space. Zou et al. (2020) argue that internationalisation of the curriculum is often engaged in multiple, competing and even contradictory manners by different institutions thereby creating a conflagration of approaches. Many see it as a top-down strategy aimed at showcasing the university on the global scale and not necessarily the enhancement student learning. As such the internationalisation of the curriculum is seen as a continuum, though others see it as a means to an end and not an end in itself (Egron-Polak, 2021). Other perspectives on the internationalisation of the curriculum simply conceive it as the task of making the curriculum content internationally relevant, or as an instrument with which students can be provided international exposure. Better still, it can be seen as a tool to prepare students for globalisation and the fourth industrial revolution. Regardless of how curriculum internationalisation is viewed, it must be understood or construed as working towards a greater good which to Egron-Polak (2021) is an enhanced student experience but to De Wit et al. (2015b) is the enhancement of the quality of education and research and making a meaningful contribution to the society while at the same time being very intentional in its purpose. Though internationalisation of curricula cannot be debated as constituting internationalisation, the question of its intentionality can be debated when look at from the backdrop of curriculum decolonisation or recent curriculum

theories which speak to contextual relevance rather than global experience (Fomunyam, 2020a, 2020b). Further debates arise on whether the internationalisation of the curriculum contributes to the enhancement of quality and this would be particularly tricky because one would have to study which curriculum matters are embedded in the said curriculum, what responsibilities they carry, the orientation of responsiveness, or what dimensions of responsiveness they are able to achieve, amongst others (Fomunyam & Teferra, 2017).

4. Conclusion

All in all, whether the aspects describe above constitute internationalisation or not, by virtue of the arguments outlined and the viewpoints being articulated, the focus of this chapter is on the fact that as long as they contribute to an enhanced student experience, regardless of how that is measured, at least we move forwards. Internationalisation in higher education has always been and will continue to be a hot potato, with divergent and conflicting views on the subject, as well as on what purpose it should serve. The reconfiguration of the definition and the debates it generated all testify to the subjective and debatable nature of the sub-field. While most scholars agree that internationalisation of some sort in the higher education environment is valuable, there is no consensus on how that value can be measured. This is why an attempt by De Wit et al. (2015b) to bring to light certain criteria (intentionality and meaningful contribution to the society) has met with stiff resistance particularly from those in the global South as a whole, and Africa in particular, who contend that the playing field is not levelled. Their contention is that using certain criteria which would apply globally would be a fallacy because while internationalisation happens everywhere, it happens intentionally in some places but by omission in others.

With or without internationalisation, higher education institutions in Africa need to work towards building the best educational architecture to ensure that their students

get the best of educational experiences. From teaching and learning to research, or from curriculum to academic support it is clear that nothing works by itself, and no amount of internationalisation would make a difference without the institutions making a significant change in the structure and operation of the institutions ,as well as their approach. The quality of education would not simply improve because of academic mobility of student and or staff, or the quality of curriculum experience would not increase because an international component has been added into it. The fundamental questions around this focus on whether the staff and students possess enough social, cultural, economic, and political capital to engage at that level, and whether the set curriculum can be contextually responsive. Furthermore, questions will arise on the ability of the staff to promote disciplinary responsiveness regardless of whether they are foreign or local.

This chapter therefore notes the following: that whether internationalisation takes place or not, all activities being engaged with to promote an enhanced educational experience for both students and staff should be encouraged and supported at all levels. Secondly, there is a need for further debate and engagement on higher education and particularly how it relates to Africa, so as to improve understanding and avoid fostering neo-colonialism and its ills on the continent. Thirdly, the subject of internationalisation needs to be understood from the backdrop of decolonisation and the merits it carries, and not on the back of sentiments and global belonging. Fourth, the constellations around internationalisation with regards to excellence and relevance need to be further theorised and understood against the need for responsiveness in African higher education, for Africa is yet to reach the stage where the scholar can stay in his or her ivory tower and forget the fact that higher education in Africa is a public good and must contribute immensely to the society. Although the desire to remain fascinated with ideas is strong, action-oriented research is needed on the continent and Africa must start setting its own research agenda if this goal (action

oriented research) is to be achieve. Finally, with or without internationalisation, we move forward as a continent, striving to ensure that all the facets of higher education work together to give all concerned the best of experiences.

References

Adamu, A. Y. (2021). Harmonisation of higher education in Africa: 20 years after the Bologna Process. *Tuning Journal for Higher Education, 9*(1), 103-126. https://doi.org/10.18543/tjhe-9(1)-2021pp103-126

Altbach, P. (2002). Perspectives on internationalizing higher education. *International Higher Education, 27*, 6-8. https://doi.org/10.1080/0379772022000003297

Antikainen, A. (2005). Classical Sociological Theories and the Modern Sociology of Education. In J. Nyman (Ed.), *Studies in the Sociology of Education and Culture*. Joensuu: Joensuu University Press.

Arum, R., Beattie, I. R., & Ford, K. (2010). *The structure of schooling: Readings in the sociology of education*. London: Sage.

Badat, S. (2009). The role of higher education in society: Valuing higher education. *HERS-SA Academy*, 13-19.

Ballantine, J. H., Hammack, F. M., & Stuber, J. (2017). *The sociology of education: A systematic analysis*. London: Routledge. https://doi.org/10.4324/9781315299914

Barrett, L. F. (2016). Functionalism cannot save the classical view of emotion. *Social cognitive and affective neuroscience, 12*(1), 34-36. https://doi.org/10.1093/scan/nsw156

Barton, P. E. (2003). *Hispanics in science and engineering: A matter of assistance and persistence, Educational Testing Service*. Retrieved from Policy Information Report:

Bektas, D. (2008). Counseling international students in Turkish universities: Current status and recommendations. *International Journal for the Advancement of Counseling, 30*(4), 268-278. https://doi.org/10.1007/s10447-008-9064-y

Bennett, K. P., & LeCompte, M. D. (1990). *How Schools Work: Sociological Analysis of Education*. New York: Longman Publishing

Blakemore, K., & Cooksey, B. (2017). *A sociology of education for Africa* (Vol. 8). London: Routledge. https://doi.org/10.4324/9781315412733

Blickenstaff, C. J. (2005). Women and science careers: Leaky pipeline or gender filter? *Gender and education, 17*(4), 369-386. https://doi.org/10.1080/09540250500145072

Blumer, H. (1986). *Symbolic interactionism: Perspective and method.* California: University of California Press.

Booher-Jennings, J. (2008). Learning to label: Socialisation, gender, and the hidden curriculum of high-stakes testing. *British Journal of Sociology of Education, 29*(2), 149-160. https://doi.org/10.1080/01425690701837513

Buccheri, G., Gurber, N. A., & Bruhwiler, C. (2011). The impact of gender on interest in science topics and the choice of scientific and technical vocations. *International Journal ofScience Education, 33*(1), 159–178. https://doi.org/10.1080/09500693.2010.518643

Carmody, P. (2017). Africa-to-Africa internationalisation: Key issues and outcomes. *South African Journal of International Affairs, 24*(2), 266-267. https://doi.org/10.1080/10220461.2017.1333037

Carter, M. J., & Fuller, C. (2015). Symbolic interactionism. *Sociopedia. isa, 1*, 1-17. https://doi.org/10.1177/205684601561

Chellaraj, G., Maskus, K., & Aaditya, M. (2008). The contribution of international students to U.S. innovation. *Review of International Economics, 16*(3), 444–462. https://doi.org/10.1111/j.1467-9396.2007.00714.x

Chow, P. (2015). What international students think about US higher education? *International Higher Education, 65*, 10–12. https://doi.org/10.6017/ihe.2011.65.8568

Clark, B. R. (1973). Development of the sociology of higher education. *Sociology of Education, 46*(1), 2–14. https://doi.org/10.2307/2112203

De Wit, H. (2011). Globalisation and internationalisation of higher education. *International Journal of Educational Technology in Higher Education, 8*(2), 241–248.

De Wit, H. (2020). Internationalisation in Higher Education: A Western Paradigm or a Global, Intentional and Inclusive Concept. *International Journal of African Higher Education, 7*(2), 31–37.

De Wit, H., Hunter, F., Howard, L., & Egron-Polak, E. (2015). *Internationalisation of higher education.* Brussels European Parliament.

De Wit, H., & Merkx, G. (2012). The history of internationalisation of higher education. In D. Deardorff, H. De Wit, J. Heyl, & T. Adams (Eds.), *The SAGE handbook of international higher education* (pp. 43–59). Thousand Oaks: SAGE. https://doi.org/10.4135/9781452218397.n3

Durkheim, E. (1956). *Education and society.* London: Collier.

Egron-Polak, E. (2021). Internationalisation of Higher Education. Retrieved from https://www.tuse.ie/wordpress/wp-content/uploads/2021/03/Ireland-2021-Internationalisation-of-higher-education-EEP-25012021.pdf

Elias, N. (1978). *What Is Sociology?* New York: Columbia University Press.

Elrehail, H., Emeagwali, O. L., Alsaad, A., & Alzghoul, A. (2018). The impact of Transformational and Authentic leadership on innovation in higher education: The contingent role of knowledge sharing. *Telematics and Informatics, 35*(1), 55–67. https://doi.org/10.1016/j.tele.2017.09.018

Fomunyam, K. G. (2014). Curriculum theorizing and individualism: An exploration of the curriculum's relation to the social, personal and political dimensions of schooling. *Mevlana International Journal of Education (MIJE), 4*(2), 122–131.

Fomunyam, K. G. (2017). Decolonising the future in the untransformed present in South African higher education. *Perspectives in Education, 35*(2), 168–180. https://doi.org/10.18820/2519593X/pie.v35i2.13

Fomunyam, K. G. (2019). Theorising Decolonisation, Globalisation and Internationalisation in Higher Education. In K. G. Fomunyam (Ed.), *Decolonising Higher Education in the Era of Globalisation and Internationalisation* (pp. 12–29). Cape Town: Sun Media. https://doi.org/10.18820/9781928424277

Fomunyam, K. G. (2020a). Deterritorialising to Reterritorialising the Curriculum Discourse in African Higher Education in the Era of the Fourth Industrial Revolution. *International Journal of Higher Education, 9*(4), 27–34. https://doi.org/10.5430/ijhe.v9n4p27

Fomunyam, K. G. (2020b). Theorising the Itinerant Curriculum as the Pathway to Relevance in African Higher Education in the Era of the Fourth Industrual Revolution. *International Journal of Education and Practice, 8*(2), 248–256. https://doi.org/10.18488/journal.61.2020.82.248.256

Fomunyam, K. G., & Rahming, M. (2017). Knowledge as power for social transformation. *Zoe International Journal of Social Transformation, 1*(1), 1–6.

Fomunyam, K. G., & Teferra, D. (2017). Curriculum responsiveness within the context of decolonisation in South African higher education. *Perspectives in Education, 35*(2), 196–207. https://doi.org/10.18820/2519593X/pie.v35i2.15

Furedi, F. (2010). Introduction to the marketisation of higher education and the student as consumer. In M. Molesworth, R. Scullion, & E. Nixon (Eds.), *The marketisation of higher education and the student as consumer* (pp. 1–8). London: Routledge.

Ge, Y. (2022). Internationalisation of higher education: new players in a changing scene. *Educational Research and Evaluation, 27*(3–4), 229–238. https://doi.org/10.1080/13803611.2022.2041850

Govinder, K. S., Zondo, N. P., & Makgoba, M. W. (2013). A new look at demographic transformation for universities in South Africa. *South African Journal of Science, 109*(11–12), 1–11. https://doi.org/10.1590/sajs.2013/20130163

Grayson, L. P. (1977). A brief history of engineering education in the United States. *Engineering Education, 68*(3), 246–264.

Greer, L. L., Van Bunderen, L., & Yu, S. (2017). The dysfunctions of power in teams: A review and emergent conflict perspective. *Research in Organisational Behavior, 37*, 103–124. https://doi.org/10.1016/j.riob.2017.10.005

Hahn, K., & Teferra, D. (2014). Tuning as instrument of systematic higher education reform and quality enhancement: The African experience. *Tuning Journal for Higher Education, 1*(1), 127–163. https://doi.org/10.18543/tjhe-1(1)-2013pp127-163

Handberg, C., Thorne, S., Midtgaard, J., Nielsen, C. V., & Lomborg, K. (2015). Revisiting symbolic interactionism as a theoretical framework beyond the grounded theory tradition. *Qualitative health research, 25*(8), 1023–1032. https://doi.org/10.1177/1049732314554231

Hawawini, G. (2011). The internationalisation of higher education institutions: A critical review and a radical proposal. https://doi.org/10.2139/ssrn.1954697

Henderson, E. F. (2015). 'Meaningful higher education'?: two lenses for re-thinking contemporary global university education. *Compare: A Journal of Comparative and International Education, 45*(5), 819-824. https://doi.org/10.1080/03057925.2013.861702

Hlatshwayo, M. N., & Fomunyam, K. G. (2018). Genopolitics: The dormant niche in political science curriculum in South African universities. *2018, 14*(1), 1-9. https://doi.org/10.4102/td.v14i1.470

Hussin, A. A. (2018). Education 4.0 made simple: Ideas for teaching. *International Journal of Education and Literacy Studies, 6*(3), 92-98. https://doi.org/10.7575/aiac.ijels.v.6n.3p.92

Institute of International Education. (2015). What international students think about U.S. higher education: Attitudes and perceptions of prospective students from around the world. Retrieved from: http://www.iie.org/~/media/Files/Corporate/Publications/What-International-Students-Think-About-US-Higher-Education-2015.ashx.

International Education Association of South Africa. (2014). *Nelson Mandela Bay Global Dialogue Declaration on the Future of Internationalisation of Higher Education.* Port Elizabeth: International Education Association of South Africa.

Jakovljevic, M. (2019). Criteria for empowering innovation in higher education. *Africa Education Review, 16*(4), 53-71. https://doi.org/10.1080/18146627.2017.1369855

Jansen, J. D. (2003). On the state of South African universities: Guest editorial. *South African journal of higher education, 17*(3), 9-12. https://doi.org/10.4314/sajhe.v17i3.25399

Jones, E., & De Wit, H. (2014). Globalized internationalisation: Implications for policy and practice. *Management, 33*, 95–104.

Jongbloed, B. (2003). Marketisation in higher education, Clark's triangle and the essential ingredients of markets. *Higher education quarterly, 57*(2), 110–135. https://doi.org/10.1111/1468-2273.00238

Karodia, A. M., Soni, D., & Soni, P. (2016). Wither Higher Education in the Context of the Fees mustfall Campaign in South Africa *Research Journal of Education, 2*(5), 76–89.

Kehm, B. M. (2005). The contribution of international student mobility to human development and global understanding. *Online Submission, 2*(1), 18–24.

Knight, J. (2004). Internationalisation Remodeled: Definition, Approaches, and Rationales. *Journal of Studies in International Education, 8*(1), 5–31. https://doi.org/10.1177/1028315303260832

Knight, J. (2008). *Higher education in turmoil. The changing world of internationalisation*. Rotterdam: Sense Publishers. https://doi.org/10.1163/9789087905224

Knight, J. (2021). Higher education internationalisation: Concepts, rationales, and frameworks. *Revista REDALINT. Universidad, Internacionalización e Integración Regional, 1*(1), 65–88.

Knight, J., & De Wit, H. (1997). *Strategies for internationalisation of higher education in Asia Pacific countries*. Amsterdam: European Association for International Education.

Knight, J., & De Wit, H. (1999). *Quality and Internationalisation of higher education*. Paris: OECD.

Knight, J., & De Wit, H. (2018). Internationalisation of higher education: Past and future. *International Higher Education*(95), 2–4. https://doi.org/10.6017/ihe.2018.95.10715

Kringos, D., Carinci, F., Barbazza, E., Bos, V., Gilmore, K., Groene, O., . . . Johnsen, S. (2020). Managing COVID-19 within and across health systems: why we need performance intelligence to coordinate a global response. *Health Research Policy and Systems, 18*(1), 1–8. https://doi.org/10.1186/s12961-020-00593-x

Kuenzi, J. J. (2008). *Science, technology and engineering, and mathematics (stem) education: Background, federal policy, and legislative action*. Retrieved from Congressional Research Service reports Paper 35. Washington: Congressional Research Service:

Lang, J., & Moleski, W. (2016). *Functionalism revisited: architectural theory and practice and the behavioral sciences*. London: Routledge. https://doi.org/10.4324/9781315254838

Lowith, K. (2002). *Max Weber and Karl Marx*. London: Routledge. https://doi.org/10.4324/9780203422229

Lu, M. (2001). *International students and University support services: Utilization and Perceived effectiveness*: State University of New York at Buffalo.

Mamdani, M. (2016). Between the public intellectual and the scholar: Decolonization and some post-independence initiatives in African higher education. *Inter-Asia Cultural Studies, 17*(1), 68–83. https://doi.org/10.1080/14649373.2016.1140260

Marcus, A. I. (2005). Engineering in a land-grant context: The past, present, and future of an idea. In (pp. 1–4). West Lafayette, IN, USA: Purdue University Press.

Matheson, D. (2014). What is education? In *An introduction to the study of education* (pp. 15–32). London: Routledge. https://doi.org/10.4324/9780203105450-8

Matloff, N. (2013). Are foreign students the best and brightest? Economic Policy Institute. Retrieved from: http://www.epi.org/publication/bp356-foreign-students-best-brightestimmigration-policy/.

Matola, N., & Fomunyam, K. G. (2021). Theorising International Postgraduate Student Lecturers' Experiences in South Africa. *Universal Journal of Educational Research, 9*(6), 1274-1283. https://doi.org/10.13189/ujer.2021.090616

Maton, K. (2013). *Knowledge and knowers: Towards a realist sociology of education.* London: Routledge. https://doi.org/10.4324/9780203885734

Mattes, R. (2015). South Africa's emerging black middle class: a harbinger of political change? *Journal of International Development, 27*(5), 665-692. https://doi.org/10.1002/jid.3100

Mooney, L., Knox, D., & Schacht, C. (2015). *Understanding social problems.* Stamford: Cengage Learning.

Mulkay, M. (2014). *Functionalism.* London: Routledge.

National Academies of Sciences Engineering and Medicine. (2017). *Building America's skilled technical workforce.* Washington, DC: The National Academies Press.

National Academy of Science. (2007). *Beyond bias and barriers. Fulfilling the potential of women in academic science and engineering. Edited by National Academy of Science Committee on Maximizing the potential of women in academic science and engineering, National Academy of engineering and institute of medicine.* Washington: National Academy Press.

National Academy of Sciences National Academy of Engineering & Institute of Medicine. (2010). *Expanding underrepresented minority participation: America's science andtechnology talent at the crossroads.* Washington, DC: The National Academies Press.

National Research Council & National Academy of Engineering. (2014). *Career choices of female engineers: A summary of a workshop.* Washington, DC: The National Academies Press.

National Science Foundation. (2006). *Women, minorities, and persons with disabilities in science and engineering December 2006 Update.* Arlington, VA.

National Science Foundation. (2018). Science & engineering indicators 2018(NSB-2018-1) / Digest (NSB-2018-2)/ January 2018. Retrieved from: https://www.nsf.gov.

OECD. (2018). *Education at a glance 2018 – data and methodology: IndicatorB6.1: What is the profile of internationally mobile students?* Paris: OECD Publishing. https://doi.org/10.1787/eag-2018-en

Rao, S. S., & Singh, S. (2018). Max Weber's Contribution to the Sociology of Education: A Critical Appreciation. *Contemporary Education Dialogue, 15*(1), 73-92. https://doi.org/10.1177/0973184917744964

Ratele, K. (2014). Currents against gender transformation of South African men: Relocating marginality to the centre of research and theory of masculinities. *NORMA: International Journal for Masculinity Studies, 9*(1), 30-44. https://doi.org/10.1080/18902138.2014.892285

Rock, P. (2016). *Making of symbolic interactionism*: Springer.

Seely, B. E. (2005). Patterns in the history of engineering education reform: A brief essay. Educating the Engineer of 2020: NationalEducation Summit. In (pp. 114-130): National Academies Press.

Silver, H. (2010). Managing to Innovate in Higher Education. *British Journal of Educational Studies, 47*(2), 145-156. https://doi.org/10.1111/1467-8527.00108

Singh, M. (2010). Re-orienting internationalisation in African higher education. *Globalisation, Societies and Education, 8*(2), 269-282. https://doi.org/10.1080/14767721003780439

Smit, B., Williamson, C., & Padayachee, A. (2013). PhD capacity-building, from aid to innovation: The SANPAD-SANTRUST experience. *Studies in Higher Education, 38*(3), 441-455. https://doi.org/10.1080/03075079.2013.773218

Snow, D. A. (2001). Extending and broadening Blumer's conceptualization of symbolic interactionism. *Symbolic interaction, 24*(3), 367-377. https://doi.org/10.1525/si.2001.24.3.367

So, A. Y. (2014). The Making of the Hong Kong Middle Class in the 1997 Transition and Beyond: a Conflict Perspective. In H. Hsin-huang (Ed.), *Chinese Middle Classes: Taiwan, Hong Kong, Macao and China* (pp. 249-260). London: Routledge.

Sovic, S. (2009). Hi-bye friends and the herd instinct: international and home students in the creative arts. *Higher Education, 58*(6), 747-761. https://doi.org/10.1007/s10734-009-9223-z

Stevens, D. D., Emil, D., & Yamashita, M. (2009). Mentoring through reflective journal writing: A qualitative study by a mentor/professor and two international students. *Reflective Practice, 11*(3), 347-367. https://doi.org/10.1080/14623943.2010.490069

Talcott, P. (2013). *The social system*. London: Routledge.

Tamrat, W. (2022). COVID-19 Threat to higher education: Africa's challenges, responses, and apprehensions. In *Higher Education in Ethiopia* (pp. 223-226): Brill. https://doi.org/10.1163/9789004513488_060

Teferra, D. (2014a). Charting African higher education: Perspectives at a glance. *International Journal of African Higher Education, 1*(1), 9-21. https://doi.org/10.6017/ijahe.v1i1.5642

Teferra, D. (2014b). Charting African higher education: Perspectives at a glance. *International Journal of African Higher Education, 1*(1). https://doi.org/10.6017/ijahe.v1i1.5642

Teferra, D. (2017). Tempest in the rankings teapot: An African perspective. *International Higher Education*(91), 18-20. https://doi.org/10.6017/ihe.2017.91.10132

Teferra, D. (2020a). The irrelevance of the re-configured definition of internationalisation to the Global South. *International Journal of African Higher Education, 7*(2), 157–172. https://doi.org/10.6017/ijahe.v7i2.12905

Teferra, D. (2020b). The irrelevance of the re-configured definition of internationalisation to the Global South. *International Journal of African Higher Education, 7*(2). https://doi.org/10.6017/ijahe.v7i2.12905

Theron, L. C. (2016). Toward a culturally and contextually sensitive understanding of resilience: Privileging the voices of black, South African young people. *Journal of Adolescent Research, 31*(6), 635–670. https://doi.org/10.1177/0743558415600072

Thompson, M., & Walsham, G. (2010). ICT Research in Africa: Need for a Strategic Developmental Focus. *Information Technology for Development, 16*(2), 112–127. https://doi.org/10.1080/02681101003737390

UNESCO Institute for Statistics (UIS). (2014). Global flow of tertiary-level students. Retrieved from: http://www.uis.unesco.org/Education/Pages/international-student-flow-viz.aspx.

Verbik, L., & Lasanowski, V. (2007). The observatory on borderless higher education- international student mobility: Patterns and trends. Retrieved from: https://www.obhe.ac.uk.

Vest, C. M. (2006). Educating engineers for 2020 and beyond", The Bridge. In (pp. 38–44). Washington, DC: National Academy of Engineering.

Weber, M. (2008). *Max Weber's complete writings on academic and political vocations.* New York: Algora publishing.

Weir, S., & Faulkner, C. (2004). *Voices of a new generation: A feminist anthology.* Boston: Pearson College Division.

Wexler, P. (2017). *Social analysis of education: After the new sociology* (Vol. 57). London: Routledge. https://doi.org/10.4324/9781315211923

Woldegiorgis, E. T. (2021). Configurations of progress and the historical trajectory of the future in African higher education. *Educational Philosophy and Theory*, 1–15. 10.1080/00131857.2021.1940955

Wolhuter, C. C., & Wiseman, A. W. (2013). The Incalculable Promise of the African Continent: Higher Education Rising to the Occasion? In *The Development of Higher Education in Africa: Prospects and Challenges* (Vol. 21, pp. 3-19): Emerald Group Publishing Limited. https://doi.org/10.1108/S1479-3679(2013)0000021004

Young, M. (2002). *The Curriculum of the Future: from the'new sociology of education'to a critical theory of learning*. London: Routledge. https://doi.org/10.4324/9780203019191

Zeleza, P. (2012). *Internationalisation in Higher Education: Opportunities and Challenges for the Knowledge Project in the Global South*. Paper presented at the A SARUA Leadership Dialogue on Building Capacity of Higher Education to Enhance Regional Development, Maputo, Mozambique March 21-22, 2012.

Zou, T. X., Chu, B. C., Law, L. Y., Lin, V., Ko, T., Yu, M., & Mok, P. Y. (2020). University teachers' conceptions of internationalisation of the curriculum: A phenomenographic study. *Higher Education, 80*(1), 1-20. https://doi.org/10.1007/s10734-019-00461-w

Part 2

Theorising Topical Issues in Higher Education

Chapter 7

"Baya Funda Kuthi, Nathi Siyafunda Kubo": Transformative Community Engagement that Contributes to the Decolonisation Agenda of Higher Education

Benita Bobo
Durban University of Technology

Abstract

Using a social constructivist approach, within the social action model of community psychology, this research explores how thoughtful community engagement (CE) programmes may promote the decolonial agenda of Higher Education Institutions (HEIs) and promote transformative learning for students and community partners. This research draws on the co-management model that the Rhodes University Community Engagement (RUCE) division proposes, where partnerships between HEIs and communities are seen to be mutually beneficial. CE at Rhodes University (RU) spreads the breadth of what is termed the CE continuum, ranging from credit bearing service-learning activities to non-credit bearing volunteer activities. This research investigates a volunteer programme at RU, the Early Childhood Development (ECD) Residence Programme, as a case study. At the time of conducting this research, 15 community partners were part of the programme. Drawing on the ECD Residence Programme for case studies, this research used a reflective multiple case study design in attempting to answer the research question. Four partner groups (i.e., 4 community partners and 4 community

engagement representatives) were selected for this research. Each participant was interviewed twice (with a 6-month time gap) and also participated in two focus group discussions. Thematic analysis was used to analyse the findings.

CE at RU works from the asset-based community development (ABCD) approach, which recognises and draws on the skills, capabilities, and knowledge that all parties have and bring with them to a partnership. The preparatory work and training that community partners and student CE representatives undergo before engaging in a CE activity is an essential foundation to enable mutuality in the partnership. Additionally, drawing on the ABCD approach and reflecting on learning from CE activities facilitates an enabling environment in which transformative learning can occur. In promoting the decolonial agenda of HEIs, this form of transformative learning may lead to democratising the knowledge economy and allowing for epistemic and social justice to unfold; leading to the co-construction of knowledge in CE partnerships. This research provides valuable insight into how carefully managed CE partnerships in HEIs have the potential to contribute to the transformation agenda of HEIs, while promoting equitable societies as part of the decolonial agenda.

1.   Introduction

The sub-theme that this chapter seeks to explore is 'what kinds of engagement are happening within the African higher education landscape, and how is this shaping the course of education?' The author aims to do this through arguing that thoughtful community engagement programmes may promote decolonisation and transformative learning in higher education. The chapter draws on a community engagement programme that is run by Rhodes University (RU) as a case study.

Many definitions and interpretations of community engagement (CE) exist (Bender, 2008). In this chapter, CE is defined as an integral part of enriching teaching and research in higher education (HE) with a deeper sense of context,

relevance, and application (Lazarus et al., 2008). CE is about building inclusive and reciprocal relationships between higher education institutions (HEIs) and their local communities (Bender, 2008). For South Africa, this has stemmed from the recommendation of the White Paper of HE Transformation (1997) to make CE part of the HEIs' agenda (Bengu, 1997).

It is *community* engagement as HEIs seek to work with partners, based in other sectors such as education or social services, in meaningful ways; through co-defining the outcomes of the planned activities and co-identifying local assets to address locally defined challenges in sustainable ways. It is community *engagement* as the partnership needs to be based on collaborative relationships that are characterised by dialogue (Bender, 2008).

This research focuses on a volunteer programme at RU, as case study. It explores to what extent engaging in carefully planned CE activities may facilitate transformative learning for student volunteers and community partners. Additionally, this chapter explores whether engaging in CE activities of this nature may contribute to the decolonisation agenda of HE.

2. Transformative Learning

Research in South Africa (e.g., Isaacs et al., 2016) and elsewhere in the world (e.g. D'Arlach et al., 2009; Levkoe et al., 2014) has shown that participating in CE activities may lead to transformative learning. This is because these activities are an opportunity for student volunteers and community partners to access experiences that allow them to enhance their reflections and encourage more introspection (Davis at al., 2017). Additionally, through participating in CE activities, student volunteers and community partners become better able to understand themselves and their communities, as well as social problems in general. This understanding may propel them to act in socially responsive ways (D'Arlach et al., 2009). With this understanding of CE activities having the potential to lead to transformative learning, this section defines what transformative learning is.

Transformative learning is defined as "learning that transforms problematic frames of reference to make them more inclusive, discriminating, reflective, open, and emotionally able to change" (Mezirow, 2009, p. 92). This learning is based on the fundamental changing of fixed assumptions and calls for the formation of new frames of meaning (Şahin & Dogantay, 2018). This happens when people engage in constructive discourses with others, using these to reflect on their previously held assumptions that have been based on uncritical assimilation (Mezirow, 2000). When people do this, they start to critically question their assumptions about the world, opening up to different ways of knowing that they had not considered before (Jones, 2016).

Transformative learning may encompass six areas of transformation (Kiely, 2004). These are described as political, moral, intellectual, cultural, personal, and spiritual transformation. Political transformation is about expanding one's sense of social responsibility, both locally and globally. Moral transformation encompasses developing mutually beneficial relationships that lead to building equitable partnerships. Intellectual transformation occurs when people start to question their previously held assumptions. Cultural transformation requires a person to rethink dominant cultural values and, in this context, includes the questioning of Eurocentric thinking. Personal transformation requires individuals to rethink their lifestyles, and spiritual transformation is a movement towards understanding one's purpose in life in relation to the greater good (Kiely, 2004).

Whilst engaging in CE programmes may lead to transformative learning for those involved in them, practitioners may not always have the language for interpreting and theorising this practice (Holmes, 2015). Community engagement exists on a continuum, from charitable CE to transformative CE. Charitable CE runs the risk of reinforcing prejudices and may exaggerate imbalances of power, whereas transformative CE disrupts this through explicit exercises to enhance critical reflection (Bamber & Hankin, 2011). Transformative CE has the potential to facilitate

transformative learning for students and community partners, providing them with important skills that are critical in decision-making (Bamber & Hankin, 2011; Levkoe et al., 2014).

Transformative learning is not just about personal development; it is also about social change (Davis et al., 2017). Transformative learning alters students' and community partners' worldviews, aligning them to social justice goals of challenging dominant ideologies, deconstructing hierarchies, and critiquing biases. The long-term benefit is a new way of understanding the world and having an informed citizenry asking critical questions and working to eradicate injustice (Holmes, 2015). Through developing a critical awareness, individuals discover an awareness of the role of power and learn to act against oppressive practices (Bamber & Hankin, 2011).

Transformative learning is centred around learning through action and experience (Bamber & Hankin, 2011). For transformative learning to occur, activities need to be linked to critical reflection (Lee, Hong, & Niemi, 2014). Critical reflection is essential for transformative learning (Şahin & Dogantay, 2018) and enables people to gain insight, including becoming aware of and correcting any distorting beliefs they may hold (Karlovic, 1992).

While transformative learning is not clearly articulated as a goal within the programme explored during this research, this chapter proposes that the concept could be valuably examined in the programme, to question whether it does facilitate transformative learning. Drawing on the idea that reflection is key for transformative learning to occur (Bamber & Hankin, 2011), the programme makes use of structured and regular reflection. This reflection is done in order to ensure that learning is deepened (Lee et al., 2014).

To further support the ideas of transformative learning community partners in this research expressed how, at the onset of the programme that is explored in this research study, they thought that they had nothing valuable to contribute to student learning. They had the idea that students from RU

were there to teach them, since they were of the view that the students had more knowledge because they were university educated (Karlovic, 1992). However, this research will show that since engaging in the programme, community partners feel that they have a greater right to claim their voices in the CE space. They became convinced that they too hold valuable knowledge and that students from RU may learn valuable lessons from their organisations. They have become more confident in their dual roles as both teacher and learner. This supports the ideas of decolonisation that are expanded on below.

3.   Decolonisation

Decolonisation is described as "a process of undoing coloniality" (Oyedemi, 2018, p. 5). It is described as a process as opposed to an event and is a recurring discourse in Africa, as the reality is that inequalities still exist due to unequal access to resources because of colonisation. Although colonisation came to an end, mostly in the 1960s, the effects of it remain and are manifested in both cultural and economic spheres (Oyedemi, 2018).

European culture and ideas of producing knowledge, such as through formal education, were foregrounded and imposed on the colonised and indigenous knowledge creation and expression was relegated (Oyedemi, 2018). This led to a diminishing of the role and value of indigenous ideas and practices. A Eurocentric curriculum still prevails (Connell, 2017), however formal education is only one of many diverse ways to acquire knowledge (Şahin & Dogantay, 2018). There exist many other opportunities, such as learning for community partners, that might improve students' knowledge and skills that can be used throughout life (Şahin & Dogantay, 2018).

Through CE, democratic spaces of learning are created (Bazana 2019). Community partner voices are valued, opening participants up "to different bodies and traditions of knowledge and knowledge-making in new and exploratory

ways" (Heleta, 2016, p. 2); towards a more decolonised education. This process is two-fold: consisting of the epistemic project and the personal project, since hegemonic Eurocentric views about knowledge have resulted in a creation of "a hierarchy of superior and inferior knowledge and, thus, of superior and inferior people" (Grosfoguel, 2007, p. 214). This is the essence of the decolonisation project, which seeks to challenge not only hegemonic knowledge generation, but also psychological enslavement and a sense of unworthiness that was perpetuated through colonisation (Timmis et al., 2019).

Strides need to be made to reduce injustices in knowledge production (Heleta, 2016), through foregrounding student and community knowledge and agency (Timmis et al., 2019). This makes HEIs "relevant to the material, historical and social realities of the communities in which universities operate" (Letsekha, 2013, p. 14). There is thus a valuing of different lived realities (Grant, Quinn, & Vorster, 2018). This is particularly relevant in South Africa, which has a history of exclusion and marginalization in education based on race (Oyedemi, 2018).

Increased collaborations between HEI and community partners leads to the reduction of barriers to transformative change (Fitzgerald & Zientek, 2015). CE encourages participants to have a broader understanding of what constitutes knowledge, valuing not just academic knowledge but also knowledge that resides within communities (Millican & Bourner, 2011). This is an important part of the decolonisation project, as all knowledge is equally valued. Through doing this, multiple stories and histories that shape Africa are acknowledged (Oyedemi, 2018).

4. The Early Childhood Residence (ECD) Programme

The programme explored in this research is the ECD Residence Programme. This is a volunteer programme that was started in 2016 by the Rhodes University Community Engagement division (RUCE). It is called a *residence* programme due to it being primarily for students living in both on-campus and

off-campus residential accommodation, referred to as halls of residence. Halls of residence, hereafter referred to as halls, are defined as groups of student residence accommodation buildings, ranging from 3–5, within proximity to one another that make up a hall.

During the period of research, the ECD Residence Programme comprised two processes; Siyakhana@Makana (S@M), and the Reading Programme. S@M is 19-week project planning cycle. The aim of S@M is to introduce students to community development processes, while working closely with community partners on a shared goal. S@M is a 19-week long process, with each week being dedicated to a specific project task (Rhodes University Community Engagement, 2020). The Reading Programme entails student volunteers engaging in reading and various literacy activities at the ECD centres for a minimum of one hour per week. (Rhodes University Community Engagement, 2020).

This programme runs as a year-long programme, following the cycle of the RU academic year. RUCE established this programme with two main aims. The first aim was to work in a co-ordinated effort in ECD in Makhanda, with a focus on addressing the crisis in education, as outlined above. The second aim was to provide structured opportunities for students to be involved in CE (Rhodes University Community Engagement, 2020).

5.   Methodology and Ethical Considerations

This research takes on a reflective multiple case study approach within a social constructivist framework, since this provides an opportunity to explore the developing community partnerships in this specific context as they have evolved over time (Preece & Manicom, 2015). The data collection was qualitative in nature, aiming to provide answers to questions by exploring a variety of social settings and the individuals within these (Berg, 2007).

This research is located in a social constructivist paradigm, which recognizes that individuals make subjective

meanings of their experiences. The goal of this research was to explore participants' subjective understanding of their situations, and how these are negotiated socially and historically. Research questions were thus broad, enabling participants to construct meaning about situations (Creswell, 2007).

The sources of information that this research used were data collected from interviews and focus group discussions, as well as observations that were recorded in the research diary. During the time of undertaking this research, there were 15 partner relationships in the ECD Residence Programme, however due to time and the interactive nature of data collection, a limited number of partner groups, four in total, participated in this research. These groups included both the community partners and the student volunteers, making a total of eight participants (as a community partner and student volunteer form one partnership).

The choice of which of the partnerships to focus on was strategically decided to try and maximise differences and possible answers to the research questions (Bryman, 2012). Sampling for this research was purposive in nature. Partners selected met certain criteria, to try and establish the different perspectives of these two categories. Firstly, some partners had joined the ECD Residence Programme from its inception, whilst others joined afterwards. A selection from these two groups was to try and establish whether there might be different perspectives, since they have had different experiences of the programme. Secondly, some partners had self-reported or had done noticeably well in their partner relationships, whereas others had self-reported or had struggled somewhat in their developing partner relationships.

Interviews and focus group discussions were conducted over time, exploring developments and to see how the partnerships evolve. An initial round of interviews was conducted with student volunteers and community partners respectively, followed by a second round of interviews that commenced after a period of six months had elapsed to

enhance reflection over time. Focus groups were used to present initial findings to participants, and to generate further reflection and discussion. The initial focus group discussion, and a follow-up after a period of six months, were held with both the student volunteers and community partners present. In addition to these interviews and focus group discussions, as a participant observer, a research diary (Nadin & Cassels, 2006) was kept recording meetings and informal observations of interactions between the student volunteers and the community partners. The researcher also used a process of reflexivity to guard against the influence of prior beliefs or assumptions (Neuman, 1997). These observations were subsequently cross-checked with the research participants through focus group discussions and follow-up interviews, to determine the accuracy of these perceptions.

Thematic analysis was used to analyse the transcribed data, to identify, and report themes that occur in data (Braun & Clark, 2006). The six steps described by Braun and Clark (2006) were followed. Findings were presented to all participants for member checking (Creswell & Miller, 2000) in follow up focus group discussions to prompt further reflection and discussions.

This research adhered to ethical principles, including informed consent, confidentiality and anonymity. Participation in this research was voluntary, with all participants being high functioning adults who are 18 years or older. This research was granted ethical approval by the relevant ethics committee (PSY2017/52).

6. Findings

What follows below are some excerpts from community partners (coded as CP 1, 2, 3 and 4), and student volunteers (coded as CE 1, 2, 3, and 4). The findings are grouped into two thematic areas: community partners and student volunteers learning from one another, and community partners learning from one another.

6.1 Community partners and student volunteers learning from one another

> "...so then I thought that Rhodes students come to help us, and then we have to sit back and look at what they are doing. When Nomaxabiso facilitated the workshop, she told us this is not all about students from Rhodes University who are here to help us, they are here to get experience and then we share with them experiences that we have. So, we work together." – CP 2

Here, the community partner talks about the importance of the learning being bi-directional, in that the students do not have all the knowledge. Partners also have valuable knowledge that they can share with the students.

> "...it's not just about uhm giving back to the community but also you get to learn and benefit as a student just as the partners are benefiting from your involvement in the community engagement."– CE 3

This student volunteer concurs, noting that community engagement relationships have the potential to impact one's growth and development. This is also illustrated in the following excerpt from another student volunteer:

> "...it's not only about giving up your time it's more than that, you can actually learn something from that, you can actually give something as you learn..." – CE 1

Student volunteers learn from community partners and experience reciprocity of giving and receiving. They recognise that they are part of a community that they learn from.

> "...I learn something new every time. Every time I'm learning and gaining something." – CE 2

This student volunteer concurs that learning occurs each time they engage in volunteer activities. What follows are excerpts from community partners, who also share that they are learning from this experience of hosting volunteers in their organisations.

"At the same time they also learn from us, I also learn from them." – CP 1

Another partner concurs:

"I teach them that this is how we do things here, then they follow what I am saying..." – CP 2

Community partners during this research were given an opportunity to reflect on their role in community engagement, and through this began to recognize that they take on the role of teachers when student volunteers visit their organisations. They recognized that students not only have knowledge and skills but that students also learn at their organisations. In turn, students in this study began to value the knowledge that community partners have and respect this.

Students discussed having learnt lifelong lessons through their interactions in community engagement.

"So I think, one thing it taught me very, I think I'll carry it forward going into life is to manage my time, plan my time..." – CE 2

Another student shares similar sentiments:

"*Ja* I think I learnt, I learnt not to have so many ideas but just only, like I said, starting out small. I've learnt that uhm I couldn't emphasise this more, but planning of our time" – CE 4

6.2   *Community partners learning from one another*

Having explored how they are teachers in their organisations, community partners also started to recognise that they are able to share their various skills, knowledge and capabilities with one another. Thus, the emphasis shifts from only a student volunteer and community partner only relationship, to that of further community interaction and collaboration.

"At first when I started it was not easy, because it is not easy to stand in front of people, you see? Then there was

this time I was presenting. There is this lady, Zizipho, she taught me how to stand in front of people then here I am today, I – I am able to stand in front of people and say anything…" – CP 2

This community partner reflects on how a fellow community partner assisted her to boost her confidence and interact with diverse groups of people, including standing in front of them and giving presentations. Another community partner reflects on what they have learnt in the group:

"I have learnt a lot. I learnt in the group, and where I am working that when you are doing something for people you need to involve them…once you leave there is a big gap, it's not well." – CP 3

This partner reflects on how she can improve her work in her organisation, stating that she learnt this through being part of the ECD Residence Programme.

7.   Discussion

CE has the potential to lead to transformative learning (Davis et al., 2017), as evidence from this research shows. This is through its potential to shift preconceptions that people have, by forging partnerships between students and community partners in non-traditional settings (Akhurst & Mitchell, 2022). Findings in this research point to evidence towards transformative learning for both community partners and student volunteers. Reflection activities, embedded in CE activities, are designed to promote the development of new understandings for students (Akhurst et al.2016). Reflection was structured within the ECD Residence Programme, with community partners and CE representatives meeting every quarter to reflect on their activities and key learnings. Additionally, reflection and evaluation were structured into weeks 13 and 19 of the S@M project planning cycle. This process, facilitated by RUCE, took the form of meetings where students and partners were required to jointly engage in various reflective activities.

Six areas within which worldviews are disrupted are proposed by Kiely (2004) and are explored elsewhere in this chapter. Evidence in this research however only points to elements of four of these six areas. These are political transformation, moral transformation, cultural transformation, and personal transformation.

The first area of transformation, political transformation, refers to an expanded sense of social responsibility and citizenship, in moving away from passive volunteerism to more active involvement. It also refers to increases in the sense of awareness and understanding of the inequitable distribution of power and resources in a community (Kiely, 2004). One could say that political transformation appeared to be starting to emerge for the student volunteers who were part of this research. This is because these student volunteers reflected on having built close, personal relationships with their community partners; and due to having built these relationships, having the desire to continue being involved with the organisations beyond their involvement during the ECD Residence Programme. Community partners also expressed a desire to continue working with the student volunteers and building relationships with them. It is not clear however to what extent this happened subsequently. Further research would need to explore whether these aspirations indeed translated into action and to ascertain to what extent these experiences resulted in more in-depth political understanding in participants.

The second area of transformation, moral transformation, occurs when people develop relationships based on mutual respect leading to an evolving sense of solidarity. It occurs when community partner groups start to move away from understanding engagement as being characteristic of providing a one-way charitable service, where one is a benefactor and the other is a beneficiary; towards building reciprocal relationships where everyone's knowledge and skills are recognised and appreciated (Kiely, 2004). Within this research there was evidence of community partners being challenged in their preconceived ideas about what CE is and

what the role of student volunteers were. Community partners stated that initially they thought that CE was about students from RU lending a helping hand in their organisation. It was after the initial training that RUCE provided and through consistent engagement in the ECD Residence Programme that they came to realise that the relationship was intended to be reciprocal, with both the community partners and student volunteers learning and benefiting from the engagement. Again, a longer-term focused research project would be necessary to ascertain the degree to which moral transformation was affected.

In addition to this, in reflection during the focus group discussions held during this research, the community partners realised that it was important to have collaboration amongst themselves as community partners. The aim of this collaboration would serve to strengthen their communities. However, whereas all community partners who participated in this research made a commitment to collaborate with one another going forward, there was no evidence of this having happened upon investigation in follow-up interviews.

In the third area of transformation, cultural transformation, the participant begins to rethink dominant cultural and social values, norms, and rituals. This rethinking includes the questioning of Western thinking. In addition to this, cultural transformation is about being critical of privilege (Kiely, 2004). There has been evidence of this in this research with the emergence of valuing the knowledge of community partners as equally important as 'formal, academic' knowledge. Social knowledge should be encouraged to emerge (Eskell-Blokland, 2012). However, the instances of othering noted in the data collected signalled that whilst bridges had started to be built, the cultural divide was still experienced by participants.

Evidence in this research points to a move towards decentring Euro-American hegemony (Oyedemi, 2018) through beginning to recognise and value community partner knowledge as important for student learning and development

(Şahin & Dogantay, 2018). This process is two-fold, consisting of the epistemic project and the personal project. While the epistemic project is about knowledge creation and the valuing of all knowledge, the personal project is a rehumanizing approach which allows students, and in the case of this research, community partners to claim their spaces equally in being part of shaping knowledge. The personal project is important in processes of dismantling cultural colonisation, which has been one of the most destructive aspects of colonisation as "it tends toward permanence in social understandings of self, social practices and knowledge creation" (Oyedemi, 2018, p. 4-5). This research demonstrates that strides may be made to reduce injustices in knowledge production (Heleta, 2016), through foregrounding student and community knowledge and agency (Timmis et al., 2019). However, there still appears to be further progress to be made.

Through being engaged in the ECD Residence Programme, community partners learnt more about themselves, which led to some changes in the way that they view themselves. Reflecting as part of this research, community partners stated that prior to engaging in this programme they perceived themselves as beneficiaries and did not recognise the valuable assets they bring to the partnership, as well as their agency to be influential. Over time, community partners developed an understanding that they contributed to student development. Additionally, this research provided an opportunity for them to reflect on how they could also contribute to the development of one another as well as others in their broader communities.

In the fourth area of transformation, personal transformation, learners begin to rethink their previous self-concepts, their lifestyles, their relationships and possibly their careers. Additionally, people begin to recognise their vulnerable sides (Kiely, 2004). For this research, community partners began to recognise and value their capabilities. They started taking up leadership roles, through designing and implementing training for students to be able to volunteer effectively in their organisations. Community partners

recognised that they could teach students how to work with young children, an experience that student volunteers may not have had previously. There is also anecdotal evidence that community partners also started sharing their knowledge amongst one another. An example of this is of one of the community partners who learnt presentation skills and confidence from another community partner involved in the ECD Residence Programme. It is important to note however that when looking more closely, it seems that these instances of community partners sharing knowledge with one another occurs anecdotally and not frequently.

While this research has investigated evidence of transformative learning for the participants, it is important to highlight that as the ECD Residence Programme runs for a 19-week period, it may be unrealistic to expect substantial transformation to emerge (Worrall, 2007). Additionally, this research has not examined the impact of this transformative learning on student volunteers and community partners over time. Therefore, in taking a more critical stance, further research needs to be done to determine whether transformative learning does occur in the context of this programme and to what extent, as well as the transfer of such learning to other aspects of academic study. In addition, it is important to look at the long-term effects of this transformation on student volunteers' (Kiely, 2004) and community partners' daily lives. This is because research (e.g., Akhurst et al., 2016) shows that there is possibly a hierarchical progression towards transformative learning as student volunteers and community partners continue being involved in CE activities. Individuals may experience different levels of transformation at different times in their journeys, with some not benefitting from transformative learning at all.

Due to the limited scope of this research, transformation in this research has been taken to mean the *intention* towards acting in more socially just ways, rather than the action itself (Kiely, 2004). Further research will need to investigate such aspects further. Additionally, this research has only investigated the positive aspects of the results of

transformative learning and has not focused on the internal struggles that student volunteers and community partners may face when re-evaluating assumptions that they hold (Kiely, 2004). Further research will need to be done in this area to develop this further.

8.   Conclusion

This chapter has demonstrated how CE activities have the potential to contribute to transformative learning of students and community partners, and in turn promote the decolonisation agenda of HE. This has been evident through how there is evidence of the emergence fundamental shifts in the position of community partners in CE activities. There is beginning to be a recognition that community organisations can be sites of student learning, and the community partners can impart valuable knowledge and contribute to students' learning. This leads to the breaking down of educational barriers, as well as the potential shift in power imbalances. Additionally, there begins to be a shift in how HE is perceived. This promotion of partnership and engagement with local communities breaks down the notion of HEIs being 'ivory towers' that are inaccessible, and places to be fearful of. Lastly, we begin to see the systematic shifts for community partners themselves, in that they start to recognise themselves to be valuable contributors to student learning and development.

Having said this however, while interactions in CE have the potential of being transformative, there must be an acknowledgement that for this particular research, fully transformative experiences are not yet evident. Further research needs to be conducted to gather more information about students' assumptions and beliefs that may have been challenged, as well as ways in which they consciously made and implemented plans towards new ways of making meaning in their worlds.

Work is done to redistribute power between community partners and students, leading to more authentic relationships in the community settings. Whilst the literature highlights

the potential for differences in power and positioning to complicate partnership-building (e.g. Mitchell, 2008), this was not fully evident in this research. Perhaps the preparatory training, and continuous reflection assisted these aspects. However, these elements may also be difficult to recognise by those of us too 'close' to the work; or perhaps any discomforting responses are hard to articulate.

References

Akhurst, J. & Mitchell, C. (2022). Community-based service learning during clinical psychology training: working at the critically reflective interface. In C. Walker, S. Zlotowitz & A. Zoli (Eds). *The Palgrave Handbook of Innovative Community and Clinical Psychologies* (pp.347-373). Palgrave Macmillan. ISBN 9783030711894. https://doi.org/10.1007/978-3-030-71190-0_18

Akhurst, J., Solomon, V., Mitchell, C., & van der Riet, M. (2016). Embedding community-based service learning into psychology degrees at UKZN, South Africa. *Educational Research for Social Change, 5*(2), 136 – 150. https://doi.org/10.17159/2221-4070/2016/v5i2a9

Bamber, P., & Hankin, L. (2011). Transformative learning through service-learning: No passport required. *Education and Training*, *53*(2), 190–206. https://doi.org/10.1108/00400911111115726

Bazana, S. (2019, May 3). Teaching and learning in an age of transformation [Web log post]. Retrieved from: https://www.universityworldnews.com/post.php?story=20190429073448136

Bender, G. (2008). Exploring conceptual models for community engagement at higher education institutions in South Africa. *Perspectives in Education, 26*(1), 81 - 95.

Bengu, S.M.E. (1997). *Education white paper 3 – a programme for Higher Education transformation*. Government Gazette.

Berg, B. L. (2007). *Qualitative research methods for the social sciences*. Pearson/Allyn & Bacon.

Braun, V., & Clark, V. (2006). Using thematic analysis in Psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bryman, A. (2012). *Social research methods*. Oxford University Press.

Connell, R. (2017). Southern theory and world universities. *Higher Education Research and Development*, *36*(1), 4–15. https://doi.org/10.1080/07294360.2017.1252311

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). Sage Publications.

Creswell, J.W., & Miller, D.L. (2000). Determining validity in qualitative inquiry. *Theory Into Practice, 39*(3), 124-130. https://doi.org/10.1207/s15430421tip3903_2

D'Arlach, L., Sanchez, B., & Feuer, R. (2009). Voices from the Community: A Case for Reciprocity in Service-Learning. *Michigan Journal of Community Service Learning*, *16*(1), 5–16.

Davis, K. L., Kliewer, B. W., & Nicolaides, A. (2017). Power and reciprocity in partnerships: Deliberative civic engagement and transformative learning in community-engaged scholarship. *Journal of Higher Education Outreach and Engagement*, *21*(1), 30–54.

Eskell-Blokland, L. (2012) Critical approaches in community psychology. In M. Visser, & A-G. Moleko (Eds.), *Community psychology in South Africa* (2nd Ed) (pp. 55-70) Van Schaik Publishers.

Fitzgerald, H. E., & Zientek, R. (2015). Learning cities, systems change, and community engagement scholarship. *New Directions for Adult and Continuing Education*, *145*(Spring), 21-33. https://doi.org/10.1002/ace.20120

Grosfoguel, R. (2007). The epistemic decolonial turn: Beyond political-economy paradigms. *Cultural Studies*, *21*(2–3), 211–223. https://doi.org/10.1080/09502380601162514

Heleta, S. (2016). Transformation in higher education. *Transformation in Higher Education*, *1*(1), 1–8. https://doi.org/10.4102/the.v1i1.9

Holmes, A. J. (2015). Transformative Learning, Affect, and Reciprocal Care in Community Engagementfile:///Users/azolabobo/Documents/Psychology/PhD/Transformative learning/ace.20120.pdf. *Community Literacy Journal*, *9*(2), 48–67. https://doi.org/10.1353/clj.2015.0001

Isaacs, S., Rose, J., & Davids, C. (2016). Transformative Learning: Postgraduate Students' Reflections on a Community Engagement Programme in South Africa. *Social Behavior and Personality: An International Journal*, *44*(1), 103–115. https://doi.org/10.2224/sbp.2016.44.1.103

Jones, L. C. (2016). The Arc of Imagination in Transformative Learning Theory. *Reflective Practice: Formation and Supervision in Ministry*, *36*, 37–47.

Karlovic, L. N. (1992). Fostering Critical Reflection in Adulthood: A Guide to Transformative and Emancipatory Learning. *Canadian Journal for the Study of Adult Education*, *6*(1), 86–89.

Kiely, R. (2004). A chameleon with a complex: Searching for transformation in international service-learning. *Michigan Journal of Community Service Learning*, *10*(2), 5-20.

Lazarus, J., Erasmus, M., Hendricks, D., & Slamat, J. (2008). Embedding community engagement in South African higher education. *Sage Publications*, *3*(1), 59-85. https://doi.org/10.1177/1746197907086719

Lee, D. H. L., Hong, H., & Niemi, H. (2014). A Contextualized Account of Holistic Education in Finland and Singapore: Implications on Singapore Educational Context. *Asia-Pacific Education Researcher*, 23(4), 871–884. https://doi.org/10.1007/s40299-014-0189-y

Letsekha, T. (2013). Revisiting the debate on the Africanisation of higher education: an appeal for a conceptual shift. *The Independent Journal of Teaching and Learning*, 8(1), 5–18.

Levkoe, C. Z., Brail, S., & Daniere, A. (2014). Engaged pedagogy and transformative learning in graduate education: A service-learning case study. *Canadian Journal of Higher Education*, 44(3), 68–85. https://doi.org/10.47678/cjhe.v44i3.186039

Mezirow, J. (2009). An overview on transformative learning. In K. Illeris (Ed.), *Contemporary theories of learning. Learning theorists… in their own words* (pp. 90-105).Routledge.

Mezirow, J. (2000). Learning to think like an adult. Core concepts of transformation theory. In J. Mezirow and Associates (Eds.), *Learning as transformation. Critical perspectives on a theory in progress* (pp. 3-33). Jossey-Bass.

Millican, J., & Bourner, T. (2011). Student-community engagement and the changing role and context of higher education. *Education and Training*, 53(2–3), 89–99. https://doi.org/10.1108/00400911111115645

Mitchell, T.D. (2008). Traditional vs. critical service-learning: engaging the literature to differentiate two models. *Michigan Journal of Community Service Learning*, 14(2), 50-65.

Nadin, S., & Cassell, C. (2006). The use of a research diary as a tool for reflexive practice: some reflections from management research. *Qualitative Research in Accounting & Management*, 3(3), 208-217. https://doi.org/10.1108/11766090610705407

Neuman, W. (1997). *Social research methods: qualitative and quantitative approaches*.Pearson.

Oyedemi, T. (2018). (De)coloniality and South African academe. *Critical Studies in Education*, *oo*(00), 1–17. https://doi.org/1 0.1080/17508487.2018.1481123

Preece, J., & Manicom, D. (2015). The pedagogic contribution of community spaces and environments in service-learning projects. *Alternation Special Edition 16*, 115-140.

Rhodes University Community Engagement (2020). *Siyakhana@Makana handbook.* Retrieved from https:// www.ru.ac.za/media/rhodesuniversity/content/ communityengagement/galler y/S@M_Handbook_for_ WEB.pdf

Şahin, M., & Dogantay, H. (2018). Critical Thinking and Transformative Learning. *Journal of Innovation in Psychology, Education and Didactics*, 22(1), 103–114.

Timmis, S., Mgqwashu, E., & Naidoo, K. (2019). *South African rurality in higher education: Towards a participatory and decolonising methodology.* (SARiHE working paper No. 3, 1 – 18). South African Rurality in Higher Education.

Worrall, L. (2007). Asking the community: A case study of community partner perspectives. *Michigan Journal of Community Service Learning*, *14*(1), 5-17.

Chapter 8

A Posthumanist Theorisation of South African Higher Education Towards Sustainable Learning Environments in the Context of Africa

Sechaba MG Mahlomaholo 🆔
University of Mpumalanga

Makeresemese R Mahlomaholo 🆔
University of KwaZulu-Natal

Abstract

This chapter focuses on the theorisation of higher education research and the innovation landscape in South Africa (HESA). Furthermore, a theorisation of Egyptian Higher Education Research and Innovation Landscape) (EgHERIL) is included because of the country's proximity to Europe and the Middle East. Then the Kenyan landscape is theorised as part of Sub-Saharan Africa. At the beginning of this chapter, a concise historical survey is presented concerning how they (Kenya and Egypt) create sustainable learning environments, starting with their solutions to their respective challenges. The chapter is interested in analysing those conducive contextual factors by amplifying them and highlighting the threats to the evolving solutions to circumvent them. The focus then shifts to gathering evidence, or lack thereof, that some of the mentioned solutions work. All of the above are looked at from the perspective of the Posthuman lens that makes it possible to see the workings of humanism and liberal ideologies

in crafting legislative imperatives and policy directives. Unearthing the hand of humanism is vital because problems of colonisation disguised as quality concerns are exposed for what they are, and the basis laid for the new epistemologies and ontologies of decoloniality and transformation in higher education research and innovation in South African higher education. A Posthuman theorisation assists the chapter to pulverise and de-centre the notion of the individual in higher education research and innovation landscape, and in its place to recognise the immense role and influence of the relationalities at the level of the researcher, the higher education institution and the entire system of the country and continent. Given the Posthuman lens, the chapter attempts to answer the following questions: What is happening in the African higher education research and innovation landscape? What are the push and pull factors driving the migration and immigration of scholars to and from the African continent, and how does this affect the research and innovation capacity of higher education institutions? How have innovations in the African higher education sector shaped the course of higher education, contributed to socio-economic development, and improved lives? What kinds of engagement are happening within the African higher education landscape, and how is this shaping the course of education?

1.   Introduction and Background

In this chapter, we argue that Posthumanism presents the best theory for understanding, buffering and deepening the practice of research and innovation in South Africa (Forlano, 2017). However, we realise that the story of research and innovation in South Africa will not be complete if we leave out the discussion of research and innovation in critical African countries such as modern-day Egypt and Kenya (Chakravorti & Chaturvedi, 2019). The argument that we pursue is that South Africa, through its higher education sector, is attempting to conduct research and innovation of a high quality aimed at creating sustainable learning environments, first at these institutions of higher education and then second across

the entire country and beyond (Korovkin, 2019). All these African countries purport to operationalise their research and innovation guided by UNESCO's 17 Sustainable Development Goals (SDGs) (Vries, 2020). A closer look, though, reveals that each of the countries, while paying homage to the entire 17 SDGs, has placed particular emphasis on almost exclusively economic development goals (Egypt), the other on environmental sustainability ones (Kenya), and the last on social inclusiveness (South Africa). We are making a point that while all three categories constitute the overriding basis of the SDGs, each country seems to have chosen a particular emphasis depending on what has become urgent in its specific context. This shift in our view has detracted from the main thrust of the collective of all the SDGs, making this study urgent and necessary. For example, Egypt, while agreeing to the importance of all the 17 SDGs, has prioritised research and innovation, mainly of economic development, such that the negative impacts of the desert, inadequate food security and limited water supply can be offset (Wulff, 2020).

On the other hand, with its abundant fauna and flora, Kenya seems to have emphasised research and innovation that enable the country to take full advantage of what occurs in abundance and naturally, namely environmental sustainability (Nel, 2020). Finally, South Africa places a lot of emphasis on research and innovation that advance the agenda for social inclusivity as its primary focus (Ramutsindela & Mickler, 2020). The evidence of these choices can be found in the legislative imperatives and policy directives covering research and innovation in the respective countries (Vries, 2020).

The move towards specialisation on one of the three categories constituting SDGs has left the respective countries lagging to the extent that further research on the countries has revealed minimal advancement towards attaining the SDG per country (Chiluba et al., 2020). For example, despite the fact that the SDGs were formulated by the entire community in 2015, seven years down the line, countries like Kenya, South Africa and Egypt still record the highest level of unemployment, inequality among members of their

population, rampant poverty, and gender-based violence, especially against women and children (Froehlich et al., 2020). Not much can be said about food security, as many still go hungry without proper food in these countries. There have been significant efforts to improve education, with a lot of money being allocated, but nothing much has happened (Nel, 2020). There are still whole villages and communities in the mentioned countries where entire communities and whole villages are without clean drinking water and sanitation for humans and animals (Halkos & Gkampoura, 2021). There has been an attempt at industrialisation, but only a small portion of the population in those countries is benefitting (Chiluba et al., 2020). The idea of smart and industrialised cities is still a dream that has not materialised. Levels of inequality are second to none in the world, although research and innovation are encouraged to look at inequality and find a solution. Life below the water and land has not been adequately harnessed to benefit humanity and the planet sufficiently (Gill & Smith, 2021). Violence is rampant, and climate change is erratic because the resources are not used appropriately or equitably. Peace and justice, as well as strong institutions to safeguard such, are still under construction and, as such, are a mirage that can only be seen from a distance but have not materialised for communities in these countries and nations (Ndoro, 2021).

The point we are making is that the three African countries constituting the focus of this chapter are approaching research and innovation in a fractured and fragmented manner (Liu & Gu, 2020). As we have argued above, each country has chosen a category among the three and tried to operationalise that while paying lip service to the other two. There is thus no united and concerted effort among African countries to collectively address the challenges laid bare by the SDGs (Bray, 2021). Each country pursues its own agenda given what is essential in its own context. Even at each country's level, there is further fragmentation in that not all three categories of the SDGs are pursued equally (Giliberto & Labadi, 2022). This paucity has resulted in Africa being unable to attain much of its Agenda 2063 items (Africa

Union Commission, 2017). For example, not many of the three countries experience prosperity based on inclusive growth and sustainable development (Addaney, 2018). The continent is still not united politically or otherwise. Furthermore, good governance is still a dream as corruption and greed take hold (Hingston, 2016). The ideals of a common identity, democracy, and a peaceful Africa with people-driven development, and the development of women and children's potential, are forgotten (Mbaku, 2019).

The abovementioned challenges that cut across the SDGs and the Africa Agenda 2063 also cut across the National Development Plan of South Africa (Fourie, 2018). The Higher Education institutions that are supposed to lead the charge towards realising these laudable intents are fragmented and immobilised (Radinger-Peer & Pflitsch, 2017). However, a few African universities make it to the international ranking tables, mainly in South Africa. However, their impact is still negligible because of their limited numbers (Lee et al., 2020). Given the above, therefore, it would seem that a more appropriate and meaningful approach would thus be the one that recognises the complexity of research and innovation. Such an approach would be the one that would realise that every aspect of the SDGs is entangled with the rest and that there would be no way that any one SDG could be singled out and handled in isolation. Each one of the SDGs is also meaningful in the context of the others (Fourie, 2018). One category of SDGs (e.g. social inclusivity) will only make sense when analysed against the backdrop of the rest (e.g. environmental sustainability and economic development of all).

2. Posthumanist Approach to Research and Innovation in Africa

In this chapter, we argue that the Posthuman Theory seems best suited under the circumstances to enable us to lay bare and understand the intricacies and complexities of higher education research and innovation (Forlano, 2017). Posthumanism is most appropriate because it operates

at the multi-perspectival and multi-layered levels of a multidisciplinary subject matter. Posthumanism is birthed from a theorisation rejecting an isolated genius's Piagetian genetic epistemology (Eglash et al., 2020). Posthumanism acknowledges the contributions of many in constructing any one entity, be it research or innovation. It is a theory that has gone beyond Vygotskii's socio-culturalism that recognises the importance of the other, the able other, in enhancing and deepening understanding (Lamola, 2022). Posthumanism affirms Bronfenbrenner's ecological perspective but goes beyond the confines of the micro-, meso-, exo- and macro-systems (Eglash et al., 2020). In doing research, understanding that it is contextualised in this manner is valuable and important but incomplete. A complete approach acknowledges the de-centred notion of the self/the knower/ the researchers (Blyth & Meiring, 2018). In short, according to this perspective, knowing is not about me as an individual knower but about the relationships of knowing, which are important. Relationality that pulverises the sanctity of the individual is what is important (Ceder, 2018). Posthumanism affirms that it is not just about the individual knower but about knowledge as a space into which one may come in and get out as necessary during the process (Romm, 2021). Knowledge or expertise is not resident within individuals but between them. No person is guaranteed the status of the knower, *ad infinitum*, but as the situation demands, he may be called in to share their idea on any matter for a given duration of time (Perry, 2021).

Post humanity thus enables higher education research and innovation in Africa to be understood and conducted from as many perspectives as possible (Braidotti, 2016). It enables all three dimensions of the SDGs to be integrated and analysed at the same time such that the voices of all can be heard at the same time (Copeland, 2021). It advocates for the integration of social inclusivity into economical development as well as environmental sustainability. It recognises the entanglement of all in one another. The Africa 2063 Agenda is seen as being at one with the SDGs and the NDP, with each merely shedding a bit of light from wherever perspective they are (Tchekpassi,

2020). The most significant contribution of Post humanity is not because it is anti-human or less than human but because it is more effective than human. It includes what is non-human, all that is human, and all that is more than human (Preiser et al., 2021).

This all-encompassing approach of Post humanity was also made possible by the Fourth Industrial Revolution (4IR), which saw one's individuality extended far beyond ever imagined; through such advanced technologies in research and innovation, we started using concepts such as ubiquity to ensure that the researchers were everywhere all the time (Lamola, 2021). Their way of functioning was omniscient and omnipresent. COVID-19 did indeed have its hold on humanity's throat. However, despite the delayed arrival of the vaccines on the scene, humanity could still mitigate the impact through remote teaching and learning and researching through posthuman means (Ahmed, 2020).

3.   Posthumanism, Africanisation and Decoloniality

From the above discussion, exceptionally few theoretical positions would be more compatible with the SDGs, Africa Agenda 2063 and the National Development Plan than Post humanity (Nhemachena, 2018). One of the pillars of Post humanity is that it fiercely contests the sway that humanity, as a theoretical position, has overall, mainly research and innovation (Botha, Griffiths & Prozesky, 2021). Humanity, as the outcome of the Middle Ages' Enlightenment, places and ranks humans on a ladder towards perfection. According to society, the white young man is at the top of the ladder, and the bottom is an elderly Black woman (Le Grange, 2020). The message in this depiction is that all human beings should strive towards being like the young white man who, in his own right, is in the perfect space like the gods.

On the other hand, the Black woman, almost like a slave, has only herself to blame as she finds herself despised every time and has to aspire and work towards being like the rest.

The depiction of enlightenment that has informed western thought to date repeats the same error of hiding knowledge about human beings. One snippet presents what it assumes to be significant and total about human beings (Leibowitz, 2017). The knowledge about and of the Black woman is hidden like the knowledge of all Black people today. Their knowledge is hidden underneath the stories of white people who are presented as the standard and measure of perfection.

It is against this racism that Post humanism contests the sway of enlightenment that has hidden racism so neatly tugged away but is influential in terms of telling who is important and whose story is important is worth knowing (Ndlovu-Gatsheni, 2018). Research and innovation couched in Post humanity will thus be able to unearth and expose the taken-for-granted racism (Hudson, 2018). Posthumanity always shows the hand of enlightenment and its toxic effects.

The struggle for research and innovation in higher education in South Africa and throughout the continent has precisely been the above. Posthumanity has come at the right time as the instrument of transformation and disruptive theorisation away from the self-perpetuating influence of humanity and enlightenment (Etieyibo et al., 2021), in the place of the above posthumanity advocate for equality, equity, social justice, peace and hope, among others. Research and innovation mounted on Post humanity acknowledge all knowledge and ways of knowing. Posthumanity is additive in approach in that privileged knowledge is one that is inclusive, empowering and transformative (Barreto, 2014). Instead of advancing the agenda for colonialism as preached by humanity and enlightenment, posthumanity talks about decoloniality, where the knowledge of all, including the marginalised and the excluded, is recognised and validated (Etieyibo et al., 2021). It makes a case for the colonised in that they, too, have a story and a good story. It is not only about the west and the westerners' knowledge, but it is about all of humanity whose knowledge is worth knowing and telling about. It affirms and valorises Africanisation as another mode of knowing which is indigenous to the African continent. Africanisation which

is about knowledge of the indigenous is valorised and made popular and unearthed. By Africanisation, Posthumanity does not reject all other forms of knowledge; instead, it is additive in that it advocates for all forms of knowledge to be included without excluding any (Levander & Mignolo, 2021).

Posthumanity deepens the thorough understanding of humans, non-humans and more than humans (Schiølin, 2020). The value, for example, of resources, machines, computers, infrastructures, animals, plants and the entire universe are recognised through Posthuman theorisation. Posthumanity, like the SDGs, is opposed to the anthropocentric view of the world where only humans and their knowledge (s) matter (Bozalek & Pease, 2020). It decenters knowledge such that it does not inhabit one being or non-being. Knowledge is multiple, multi-layered and multi-perspectival according to Post humanity. The western canon of knowledge is not rejected from a posthuman perspective. It acknowledges the value and importance of all, whether human or not. The individual is decentered to acknowledge the relationalities that constitute them. The era of the 4IR also argues for the extended human who can do and reach far more than the conventional human can achieve due to the embedded advanced technologies, such as artificial intelligence. Concepts such as the cyborg have seen the light of day under the influence of Post humanity to confirm the interaction between humans and that which is not to produce that which is beyond human (Ferrante, 2018). Think about the blade runner who is amputated but who, because of the prosthetics technologies, can run faster than an ordinary human being because of the enhanced ability due to the fusion of biology and the technological (Bozalek & Pease, 2020).

4. **Conclusion**

Posthuman thought is integrative in its approach. While research and innovation may be regarded as specialists and separate processes, this theorisation sees them as integrated into the practice of everyday life. Posthumanity considers these processes integrated into social policies

and legislative imperatives (Shozi, 2020). It is impossible to talk about national research and innovation policy without considering the history of the nation they take place in. For example, Egypt's research and innovation practices only make sense when one considers the turbulent history of this country through its 2011 revolutions and attempts towards stabilisation beyond that (Cantini, 2021). One cannot produce a complete account of South Africa's national research and innovation framework without acknowledging the momentous events of 1994 and 1996 to date (Taylor, 1996). These have profoundly influenced the achievements or lack thereof by the abovementioned framework. The constitution and successive legislation operationalisation is also entangled in the research and innovation framework developed for the country. Gumede (2020) is correct when he confirms that the extent SDGs are achieved is also a function of the presence or absence of an overarching policy framework related to the practices and thoughts on the ground. Research and innovation manifest the vision and mission statement of the country's strategic plan, its constitution, and all its legislation and priorities, as discussed above.

We have described the challenges facing research and innovation in Egypt, Kenya and South Africa as examples of how all the above come together to produce challenges and collectively achieve the objectives. A discussion of the SDGs and how they are pursued in these three illustrative countries was presented and integrated into the Africa Agenda 2063 and reference to South Africa's National Development Plan. The above argument demonstrates how this integration is necessary, especially if Posthumanity is the overriding theoretical framework. A detailed discussion of Posthumanity is further provided by showing how a collectivised approach taking into consideration the non-human, human and more-than-human actors and factors is helpful in research and innovation that is Africanised, decolonial and transformative.

References

Addaney, M. (2018). The African union's agenda 2063: education and its realisation. In A. C Onuora-Oguno, W. O. Egbewole, & T. E. Kleven (Eds.), *Education Law, Strategic Policy and Sustainable Development in Africa* (pp. 181-197). Palgrave Macmillan. https://doi.org/10.1007/978-3-319-53703-0_8

Africa Union Commission. (2017). *Agenda 2063-The Africa We Want.* African Union. https://doi.org/10.20935/al1336

Ahmed, H. O. K. (2020). A Suggested Strategic Roadmap for Public Egyptian Universities to Adopt and Adapt to the Requirements of the Fourth Industrial Revolution and Society 5.0 to Prepare Students for the Future Labor Market. *Journal of Education and Practice, 11*(29), 17-38. https://doi.org/10.7176/jep/11-29-03

Barreto, J. M. (2014). Epistemologies of the South and human rights: Santos and the quest for global and cognitive justice. *Ind. J. Global Legal Stud.*, *21*, 395-422. https://doi.org/10.2979/indjglolegstu.21.2.395

Blyth, C., & Meiring, R. (2018). A posthumanist approach to environmental education in South Africa: implications for teachers, teacher development, and teacher training programmes. *Teacher Development*, 22(1), 105-122. https://doi.org/10.1080/13664530.2017.1327883

Botha, L., Griffiths, D., & Prozesky, M. (2021). Epistemological Decolonization through a Relational Knowledge-Making Model. *Africa Today*, 67(4), 50-73. https://doi.org/10.2979/africatoday.67.4.04

Bozalek, V., & Pease, B. (Eds.). (2020). *Post-anthropocentric social work: Critical Posthuman and new materialist perspectives.* Routledge. https://doi.org/10.4324/9780429329982

Braidotti, R. (2016). Posthuman critical theory. In D. Banerji, & M. R. Paranjape, M. R. (Eds.), *Critical posthumanism and planetary futures* (pp. 13-32). Springer. https://doi.org/10.1007/978-81-322-3637-5_2

Bray, T. M. (2021). *Shadow education in Africa: Private supplementary tutoring and its policy implications.* Comparative Education Research Centre, The University of Hong Kong. https://doi.org/10.4324/9781003317593-6

Cantini, D. (2021). Seeing Social Change Through the Institutional Lens: Universities in Egypt, 2011–2018. In Y. Berriane, A. Derks, A. Kreil, A., & D. Lüddeckens (Eds.), *Methodological Approaches to Societies in Transformation* (pp. 61-88). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-65067-4_3

Ceder, S. (2018). *Towards a posthuman theory of educational relationality.* Routledge. https://doi.org/10.4324/9781351044196

Chakravorti, B., & Chaturvedi, R. S. (2019). *How technology could promote growth in 6 African countries.* Retrieved from https://hbr.org/2019/12/research-how-technology-could-promote-growth-in-6-african-countries

Chiluba, B. C., Chitangala, F., & Dube, G. (2020). Will the current coronavirus disease 2019 affect progress in the attainment of sustainable development goals in Africa? *Biomedical and Biotechnology Research Journal (BBRJ)*, 4(5), 60-64.

Copeland, K. (2021). Reimagining innovation for "social" entrepreneurship: Non-human spaces for the SDGs. *Journal of the International Council for Small Business*, 2(2), 134-146. https://doi.org/10.1080/26437015.2021.1882917

Eglash, R., Bennett, A., Babbitt, W., Lachney, M., Reinhardt, M., & Hammond-Sowah, D. (2020). Decolonising Posthumanism: Indigenous material agency in generative STEM. *British Journal of Educational Technology*, *51*(4), 1334-1353. https://doi.org/10.1111/bjet.12963

Etieyibo, E., Katsaura, O., & Musemwa, M. (2021). Politics and Decolonization in Africa: Theoretical Pointers and a Preamble. *Africa Today*, *67*(4), 2-9. https://doi.org/10.2979/africatoday.67.4.01

Ferrante, A. (2018). Posthuman Materialities in Education: A Nomadic and Non-anthropocentric Research. In K. Hannes, B. Dierckx de Casterlé, Heylighen, & Truyen F. (Eds.), *Proceedings of the European Congress of Qualitative Inquiry* (ECQI) (pp. 1–8). KU Leuven NQRL.

Forlano, L. (2017). Posthumanism and design. *She Ji: The Journal of Design, Economics, and Innovation*, 3(1), 16–29. https://doi.org/10.1016/j.sheji.2017.08.001

Fourie, W. (2018). Aligning South Africa's National Development Plan with the 2030 Agenda's Sustainable Development Goals: Guidelines from the policy coherence for development movement. *Sustainable Development*, 26(6), 765–771. https://doi.org/10.1002/sd.1745

Froehlich, A., Siebrits, A., & Kotze, C. (2020). *Space Supporting Africa: Volume 2: Education and Healthcare as Priority Areas in Achieving the United Nations Sustainable Development Goals 2030*. Springer Nature. https://doi.org/10.1007/978-3-030-61780-6

Giliberto, F., & Labadi, S. (2022). Harnessing cultural heritage for sustainable development: An analysis of three internationally funded projects in MENA Countries. *International Journal of Heritage Studies*, 28(2), 133–146. https://doi.org/10.1080/13527258.2021.1950026

Gill, J. C., & Smith, M. (Eds.). (2021). *Geosciences and the sustainable development goals*. Springer Nature. https://doi.org/10.1007/978-3-030-38815-7

Gumede, V. (2020). *Africa's Wellbeing in an Uncertain World: Searching for Solutions.* Jonathan Ball Publishers.

Halkos, G., & Gkampoura, E. C. (2021). Where do we stand on the 17 Sustainable Development Goals? An overview on progress. *Economic Analysis and Policy*, 70, 94–122. https://doi.org/10.1016/j.eap.2021.02.001

Hingston, C. A. (2016). Towards gender equality in Africa: a review of Aspiration 6 in Agenda 2063. *Journal of African Union Studies*, 5(2), 39–49.

Hudson, H. (2018). Larger than life? Decolonising human security studies through feminist Posthumanism. *The Strategic Review for Southern Africa*, *40*(1), 46-64. https://doi.org/10.35293/srsa.v40i1.269

Korovkin, V. (2019). National digital economy strategies: A survey of Africa. *ORF Issue Brief*, *313*, 1-5.

Lamola, M. J. (2021). Africa in the Fourth Industrial Revolution: A status quaestionis, from the cultural to the phenomenological. In B. D. Okyere-Manu (Eds.), *African Values, Ethics, and Technology: Questions, issues, and approaches* (pp. 35-52). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-70550-3_3

Lamola, M. J. (2022). The future of artificial intelligence, Posthumanism and the inflection of Pixley Isaka Seme's African humanism. *AI & Society*, *37*(1), 131-141. https://doi.org/10.1007/s00146-021-01191-3

Le Grange, L. (2020). The (Post) human condition and decoloniality: Rethinking and doing curriculum. *Alternation*, *31*, 119-142. https://doi.org/10.29086/2519-5476/2020/sp31a7

Lee, J. J., Vance, H., Stensaker, B., & Ghosh, S. (2020). Global rankings at a local cost? The strategic pursuit of status and the third mission. *Comparative education*, *56*(2), 236-256. https://doi.org/10.1080/03050068.2020.1741195

Leibowitz, B. (2017). Cognitive justice and the higher education curriculum. *Journal of Education (University of KwaZulu-Natal)*, (68), 93-112.

Levander, C., & Mignolo, W. (2011). Introduction: The global South and world dis/order. *The Global South*, *5*(1), 1-11. https://doi.org/10.2979/globalSouth.5.1.1

Liu, Y., & Gu, X. (2020). Media multitasking, attention, and comprehension: A deep investigation into fragmented reading. *Educational Technology Research and Development*, *68*(1), 67-87. https://doi.org/10.1007/s11423-019-09667-2

Mbaku, J. M. (2019). Constitutionalism and Africa's Agenda 2063: How to Build" the Africa We Want". *Brook. J. Int'l L.*, 45, 537-678.

Ndlovu-Gatsheni, S. J. (2018). *Epistemic freedom in Africa: Deprovincialization and decolonisation.* Routledge. https://doi.org/10.4324/9780429492204

Ndoro, W. (2021). Heritage and/or Development—Which Way for Africa? In B. Baillie, M. L. S. Sørensen, & L. & Philpot (Eds.), *African Heritage Challenges* (pp. 103-124). Palgrave Macmillan. https://doi.org/10.1007/978-981-15-4366-1_4

Nel, M. (2020). Inclusive and Special Education in Africa. In B. Lingard, S. Sellar, S. Lewis, & G. W; Noblit (Eds.), *Oxford Research Encyclopedia of Education.* Oxford University Press. https://doi.org/10.1093/acrefore/9780190264093.013.1008

Nhemachena, A. (2018). Decolonisation, Africanisation and the cannibalistic figure of the Posthuman. *Africa Speaks Occasional Lecture Series*, *20*. University of South Africa's

Perry, M. (2021). Pluriversal literacies: Affect and relationality in vulnerable times. *Reading Research Quarterly*, *56*(2), 293-309. https://doi.org/10.1002/rrq.312

Preiser, R., Swilling, M., Nnoli-Edozien, N., & Ramphele, M. (2021). *Towards New Narratives of Hope for Fostering Transformative African Futures.* Retrieved from https://www.marks willing.co.za/wp-content/uploads/2021/03/COR-ENCI_NewNarratives_Dec2020_A4-v1.pdf

Radinger-Peer, V., & Pflitsch, G. (2017). The role of higher education institutions in regional transition paths towards sustainability. *Review of Regional Research*, *37*(2), 161-187. https://doi.org/10.1007/s10037-017-0116-9

Ramutsindela, M., & Mickler, D. (2020). *Africa and the Sustainable Development Goals.* Springer. https://doi.org/10.1007/978-3-030-14857-7

Romm, N. R. (2021). Responsibly and Performatively Researching Multi-species Relationality. In J. McIntyre-Mills, & Y. Corcoran-Nantes (Eds.), *From Polarisation to Multispecies Relationships* (pp. 223-260). Springer. https://doi.org/10.1007/978-981-33-6884-2_12

Schiølin, K. (2020). Revolutionary dreams: Future essentialism and the sociotechnical imaginary of the fourth industrial revolution in Denmark. *Social Studies of Science*, *50*(4), 542-566. https://doi.org/10.1177/0306312719867768

Shozi, B. (2020). A critical review of the ethical and legal issues in human germline gene editing: Considering human rights and a call for an African perspective. *South African Journal of Bioethics and Law*, *13*(1), 62-67. https://doi.org/10.7196/sajbl.2020.v13i1.00709

Taylor, R. (1996). 'Race' and the transition to democracy in South Africa. *Critical Arts*, *10*(2), 158-169. https://doi.org/10.1080/02560049685310191

Tchekpassi, T. (2020). *The Becoming of Higher Education Policy in Sub-Saharan Africa: A Critical Discourse Analysis and Posthumanist Reading of a Teacher's Experiences* (Doctoral dissertation). Indiana University of Pennsylvania.

Vries, G. D. (2020). Culture in the Sustainable Development Goals: The Role of the European Union. Retrieved from https://nbn-resolving.org/urn:nbn:de:0168-ssoar-69719-7

Wulff, A. (2020). *Grading Goal Four: Tensions, Threats, and Opportunities in the Sustainable Development Goal on Quality Education*. Brill Sense. https://doi.org/10.1163/9789004430365_001

Chapter 9

System Science – An Inclusive Model

Khalida Akbar
Durban University of Technology, MANCOSA

Shamim Bodhanya
University of Kwa Zulu-Natal

Mike Muzekenyi
MANCOSA

Abstract

This chapter tries to give a review of the current scientific debates from the point of view of the top scholars in the field. The failure of global South scholars to capitalise on system science research has subsequently identified prevailing western-centric scholarship rooted in western approaches and philosophical traditions. The limited scholarship has resulted in prevailing western dominance and cultural expansionism. The dominant general western scholarship has given rise to a singular scientific system in the 21ˢᵗ century. While system science subscribes to holistic, inter- and trans-disciplinary scholarship, extensive evidence of a hegemonic, exclusivist and monopolistic tradition prevails. this chapter adopts a desk-top approach that sought to collect data and related scientifically compiled evidence. Desktop research encompasses assembling data from prevailing reserves and is preferred as it is cost-effective and considerably less contentious than field research. Dual forms of online desktop research were used. this chapter confronts the dominant reality to make certain that scholars recognise the value systems in which they are firmly rooted. The modifications offered via a clinical model prevent scholars

from inadvertently becoming custodians of the embedded value system. The inclusion of diverse realities offers equally valuable philosophical traditions, resulting in impending, progressive, and inclusive scholarship. The delivery of a clinical model facilitates an innovative, all-encompassing, and inclusive knowledge method for system sciences; advancing diversity and contrast while augmenting knowledge systems.

1.   Introduction

The inability to formulate historical and contemporary system science scholarship propositions in a vacuum gives rise to significant notions of intersection and distinctiveness. Civilizations are embedded in a unique, meticulous philosophical convention, which is supported by propositions derived from the history of the philosophy of science. It is a complex fact that prevailing science is largely a Western ascendancy dominated by related embedded philosophical conventions. The purpose of this chapter is to advocate for collaboration and legitimacy within the field. Using an example from Islamic science, the specific line of reasoning is illustrated.

The concept of hegemonic systems is then reconnoitred, and characteristics of related systems are considered. The system is then employed as an analytical strategy to scrutinize contemporary scholarship in order to demonstrate how it has become compromised and deficient. Finally, the processes of selected philosophies are expounded, allowing global scholars to connect divergent approaches to buttress and underscore existing scholarship. This then ameliorates knowledge absent of hegemonic and monopolistic claims, underscoring an improved advanced scholarship, representative of a multi-faceted globalized world.

2.   Scholarship and research

The scholarship review is organised within a particular cultural milieu. Within this time, culture is defined as a civilisation by

Towey (2023), as opposed to 'culture' explained as distinct ideas, customs and social behaviours. It may consider modern scholarship as that conducted within a primarily western milieu (in the sense of western civilisation). Rifai (2022) has argued that western science is as much related to western civilisation as Islamic science is related to Islamic civilisation. In line with the above, Aljunied (2022) outlined the examples of how Muslims incorporated Greek thought, and that western science incorporated the learning from Islamic science, which ultimately led to the Renaissance.

Nasr (2022, p. 1) confims that

> "the greatest work of Algebra in the pre-modern period is by the Persian poet Omar Khayyam. When we read his book, of course, if when you get [to a] formula or equation you could be writing in Chinese or English and could be in any civilisation, but the impact that the whole work makes upon you makes you feel that you belong to a total intellectual universe – the Islamic Universe".

Science is not value-free, but it assumes the values of the philosophical traditions within which it is embedded. Frank (2018) confirms that "philosophy and religion were so intimately tied together in the long march of western history, they both served as the conceptual background for the development of western science", while Nasr (2022) asserts that it is possible for one civilisation to learn from another, but there is a historical process which includes translation, interpretation, assimilation, modification and integration until the alien knowledge that was received is totally transformed and becomes embedded within the philosophical traditions of and inseparable from the intellectual universe of the receiving civilisation.

Science is a human activity subject to historical and sociological processes. Kazemi (2008) in Shamsaei and Shah (2017) emphasised that

> "they lean against tradition and look forward to modernity. They constantly attempt to put a religious

cap on the modern products of the West and introduce them as religious, forming a totally new social necessity. Although, they believe in modernity, but they still consider a vital role for tradition in Islamic societies. In other words, they try to find the new necessities and meanings of the modern world in the context of old, religious texts and imply that the new concepts, such as democracy, freedom, human rights etc., indeed existed in the religious context long before western civilisation came up with them" (Shamsaei and Shah, 2017, p. 881).

The aspect of the inclusive western scholarship is predominating in studies carried out to understand the link between western scholars in education and current implications of understanding education globally. The specific problem is that contemporary scholarly critiques of binaries and local-international relationships in peacebuilding reinforce the same binaries, rather than examine how they came about and with what effects (Danielsson, 2020). Diversity is highly valued in modern societies. Social cohesion, tolerance, and integration are linked to tangible benefits, including economic vibrancy and innovativeness (Al Shebli, Rahwan, & Woon, 2018). The concepts of power/ knowledge, epistemic violence, and coloniality are used to analyse how notions of scientific rationality and modernity are deeply entangled with a colonial way of seeing the world (Ideland, 2018).

3. Legitimate science in alternate philosophical worldviews

For the purpose of this discussion, the term science is used, not as restricted to physical science, empiricism, or the scientific method, but in its broadest sense, and interchangeably with scholarship and research. In the previous section science was considered as different worldviews, but it is now accepted that there is a dominant set of approaches of what constitutes good science, scholarship, and research. This dominant approach is that of western scholarship.

Twenty-first century scholarship is a western product, embedded in western philosophical traditions. This section will outline the general characteristics of how science, which is distinct from western science, conducted within a different intellectual tradition, has equal claims to legitimacy. The argument is that every distinctive philosophical tradition could have claims of legitimacy. this chapter focuses on the scholarship of Islamic sciences to illustrate this. Indian, Chinese, African scholarship, or a variety of indigenous knowledge systems spanning various parts of the world could be considered irrespective of antiquity. Indeed, differences in thinking are accepted between the epistemological approaches of East and West. "Clearly, a judicious, empirical approach is needed to try to understand what, if any, role religious ideas, and which religious ideas if so, shape environment-related perceptions and practices". (Taylor, Van Wieren, & Zaleha, 2016, p. 360).

A distinguishing feature of Islamic Sciences is that it posits that human beings can come to know through a variety of ways, primarily divided between revelation and reason. The Islamic sciences accept and assert that over the millennia, knowledge from revelation, which became embodied over time in religious texts, was made available to man via human agents known as prophets. The sacred text that is extant and considered within the Islamic worldview to be authentic today is the Qur'an. The word Qur'an literally means recital or revelation. Thus, within the Islamic philosophical tradition, scholarship draws from both religious texts and systematic study in the form of science and scholarship (Hashas and Al-Khalib, 2020). This is reinforced by Mcdonald (2023, p. 4) as he posits that

> "knowledge acquired through rational human efforts and through the Qur'an are seen as complementary. While Muslim scientists placed considerable faith in scientific method, they were also aware of its limitations. Even a strong believer in mathematical realism such as al-Biruni argued that the method of inquiry was a function of the nature of investigation: different methods, all

equally valid, were required to answer different types of questions."

Islamic Science is characterised by a focus on synthesis and holism, and embraces all branches of knowledge, including metaphysics as aspects of a single unity. This is exemplified by Al-Biruni and the number of polymaths within the classical period. Cholidi (2022, p. 129) argues that "the work of a scholar of the calibre and prolificacy of al-Biruni inevitably defies simple classification. He wrote on mineralogy, geography, medicine, astrology, and a whole range of topics, which dealt with the dating of Islamic festivals. Al-Biruni is a specific product of a philosophy of science that integrates metaphysics with physics, does not attribute to either a superior or inferior position, and insists that both are worthy of study and equally valid". Polymaths such as al-Biruni, al-Jahiz, al-Kindi, Ibn Zuhr, Ibn Rushd, al-Suyuti and thousands of other scholars are not an exception but the general rule in Muslim civilisation. The Islamic civilisation of the classical period was renowned for the number of polymaths it produced. This is a testimony to the homogeneity of Islamic philosophy of science and its emphasis on synthesis, interdisciplinary investigations, and multiplicity of methods.

Eroglu (2023 p.34) further adds that

"ten fundamental Islamic concepts are identified as constituting the framework within which scientific inquiry should be carried out, four standing alone and three opposing pairs: *tawhid* (unity), *khilafa* (trusteeship), *'ibada* (worship), *'ilm* (knowledge), *halal* (praiseworthy) and *haram* (blameworthy), *'adl* (justice) and *zulm* (tyranny), and *istisla* (public interest) and *dhiya* (waste). It is argued that, when translated into values, this system of Islamic concepts embraces the nature of scientific inquiry in its totality; it integrates facts and values and institutionalises a system of knowing that is based on accountability and social responsibility".

Two complementary aspects of the Islamic sciences have been used to demonstrate that there are other established forms of

gathering knowledge and different methods of research and assessment of truth that have their own claims of legitimacy and exist outside of the dominant western philosophical traditions. This should be considered for the enrichment of current scientific knowledge; it is inappropriate, for example, to reject understanding emerging from such scholarship as pseudo-science or as pre-scientific, because it does not fit the cultural milieu of the dominant system.

The scholarship highlights that co-constitution of European colonial knowledge existence in their particular forms would not exist without the generative role played by local agencies, artefacts, and natural environments. The notion of co-constituted knowledge disrupts binary ontologies and epistemologies as it refers to how the European/colonial and the local made each other possible throughout situated, simultaneous, open-ended, and ultimately contingent and transformative processes (Danielsson, 2020). In this process, colonial education played an instrumental role, promoting and imposing the Eurocentric ways and worldviews while subjugating everything else (Mapaling & Hoelson, 2022; Heleta, 2016). By revisiting colonial conditions that helped bring the category of the local into being, insights are gained from which to develop an alternative scholarly mode of critique that allows us to study more productively the epistemic conditions of peacebuilding inclusivity projects in the present (Danielsson, 2020). Through critical discourse analysis, they explore the orientation of higher education research towards equity and inclusivity and challenge the perception of international higher education research and its distribution through academic journals as value-neutral.

4.   Western scholarship as a hegemonic system

Scholarship, research, and science is an attempt to further human understanding and knowledge by way of systematic study, classification, theory building, justification, and by the application of general principles. The ideological system is the first of two value systems contained in hegemonic systems

(Jacobs Lara, Coral, & Kathryn, 2022). Such scholarship will be designed in such a manner that it weeds out the subjective bias of researchers and their underlying value positions. It seeks to achieve objective knowledge of a subject, which is resilient to scrutiny and falsification. This is done through methods that employ repeatability, validation, justification, robustness and rigour. Therefore, western scholarship is egalitarian, truth-seeking, and provided the claims put forth by researchers are within the accepted norms of scholarship – they have an equal chance of emerging as accepted theories.

The movement to transform and decolonise higher education, a coalition of students, progressive academics, university staff and concerned public must find ways to hold the institutions accountable and maintain the non-violent, intellectual, evidence-based, emotional and popular struggle until Eurocentrism and epistemic violence at universities are dismantled (Chrysostome & Harris, 2021; Heleta, 2016). Against this commitment/challenge, the persistent binaries that mark much of critical peacebuilding scholarship suggest the need for a new mode of doing critique (Danielsson, 2020).

To move beyond this state of critical impasse in relation to inclusivity, without dismissing sensitivity to peacebuilding's colonial and imperialist roots, problematises the emergence of the local-international dichotomy, and acknowledges that whenever and wherever this distinction emerges it is not as a neutral designation but as a move that carries political significance (Danielsson, 2020). By approaching the question of knowledge, epistemic dominance and epistemic differences in peacebuilding inclusivity projects as necessarily situated, practical and achieved rather than given, it becomes possible to disentangle and disrupt the processes whereby certain viewpoints and voices become authoritative in such projects (at the expense of others), which in turn may involve various forms of scholarly knowledge(s) (Danielsson, 2020). The underlying message is an inclusive and uplifting one. In an era of increasing polarisation and identity politics, the findings may positively contribute to the societal conversation and reinforce the conviction that good

things happen when people of different backgrounds, cultures, and ethnicities come together to work towards shared goals and the common good (AlShebli, Rahwan, & Woon, 2018). Discipline may reflect a scientist's substantive knowledge and acquired skills through training, as well as the culture in which collaborative work is carried out. Ethnicity and gender may play a role in shaping scientists' social identities, knowledge, and biases (AlShebli et al., 2018).

Internationals should not impose their knowledge but should support locally formulated knowledge and capacities (Danielsson, 2020). In the case of academic age, inverse homophily was found, i.e. scientists seem to prefer collaborating with individuals from different age groups, a possible reflection of the widely held practice of research students being mentored by, and collaborating with, more senior academics (AlShebli et al., 2018). If universities and academics want to contribute to socio-economic transformation in the country and on the African continent, they have to profoundly change what they teach and how they do it (Shamsaei & Shah, 2017; Heleta, 2016).

Findings across journals and articles demonstrate the absence of a clear definition of the concept of internationalisation, a strong western focus, and often inexplicit recommendations for practical application of research findings (George Mwangi et al., 2018). In contemplating the ecological state of the global knowledge economy, it may be impossible to remain apolitical especially if democratisation of epistemologies is seen as vital to our diversity (Tierney, 2018). The power of coloniality and the great rationality divide affects how science students are culturally constructed and scientifically taught depending on their race and national origin (Ideland, 2018). Accordingly, South African academics who teach about Africa rely primarily on western interpretations of the continent. Knowledge about Africa produced by African academics is primarily ignored (Heleta, 2016). The exclusion of Chinese educational research from western journals seems problematic in this age of globalisation, given China's size and changing role as well

as the disproportionately high number of Chinese students enrolled in western tertiary institutions (Tierney, 2018). Chinese scholars will cite western scholars with significant frequency within both Chinese journals and submissions to western journals, but western scholarly will rarely cite Asian scholars nor submit papers to eastern journals (Tierney, 2018). A rarefied global knowledge network tends to restrict and reduces the intersection across or transaction among or acceptance of diverse epistemologies not aligned with western empiricism and thought (Tierney, 2018). Discipline may reflect a scientist's substantive knowledge and acquired skills through training, and culture in which collaborative work is carried out.

5.   Methodology

A qualitative desktop methodological approach was adopted, which reconnoitres an exhaustive scholarship and research. The analysis of secondary scholarship and the use of systems theory underpins the paper. Secondary methods or desktop research was used to conduct the study.

> "The purpose of primary research generally should be to fill in gaps in existing knowledge. These gaps cannot be identified without an understanding of the existing knowledge base. The term does not imply anything about the importance of the information, only that it is being used for research beyond the specific informational need that prompted the original gathering of the data. All primary research may ultimately become someone else's secondary source" (Yong, 2022). The integrity of the research is, however, maintained.

6.   Inclusive scholarship

Exploring different ways of crafting new approaches to scholarship and research that are less hegemonic and less monopolistic are vital to ensuring that scholarship is more inclusive, tolerant of diversity and difference and hence becomes enriched. Such an undertaking could be pursued, by

adopting the philosophy of science approach – however there are shortcomings to this method.

this chapter therefore proposes that the problem is confronted by focussing on the idea of the hegemonic system. This approach is fortified by that fact that it offers other benefits, for many of the suggestions given here will be applicable to other endeavours to dismantle other hegemonic systems, since the paper posits a method that automatically generalises the problem. This approach may be used as a means to solve many of the seemingly intractable problems faced by humanity at a global level, much of which can be attributed to hegemonic systems at various levels of organisation, which need to be transformed. This is an unintended benefit of it. Consequently, the task becomes one of finding ways to dismantle hegemonic systems, in our case that of the dominant approaches to scholarship and research.

7.   Dismantling hegemonic systems

A number of ideas are proposed to transform or dismantle hegemonic systems. These are primarily in raw form and require further development if the project is to achieve fruition:

Play with the boundaries: Such a prescription is natural to systems scientists. Current boundaries around what is considered rational knowledge, need to be deliberately and consciously made more permeable, so that ideas and signals from both the internal and external environment that may usually considered to be a threat are made to appear friendlier. An example is to stop filtering and to allow the entry of deviant ideas, even ideas that may appear to strike at the very heart of science itself. These ideas, provided they come from an epistemological basis – though it might not confer with that of the hegemonic system ought to be encouraged and nurtured, so that perspectives may be widened and scholarship more robust. One way of playing with the boundaries is to reject the pseudo-science demarcation, and refrain from dismissing academic propositions or assumptions resembling creationism, vitalism, anti-evolution or the

notion of teleology. A similar approach should be taken to parapsychology or spirituality.

Disband the guile system: This goes hand in hand with making the ideological system transparent. Science is a human activity aimed at certain ends and that is not value-free. Since it is not value-free, then those values of the ideological system need to be clear and visible and open to interjection and change, while scientific scholarship should not purport to support illusory values. This is supported by Bang & Marin (2015) who outline two ways of disbanding the guile system. Underlying theories of learning and development that structure inequity, expansive views of nature-culture relations, and related possible socio-ecological futures, that drive education will achieve equity in the emerging era of science education. The method of implementation of the above statement paves the way for new and more explicit theories and more equitable education systems. These roots would lead to transparent ideological systems.

Self-organisation: Systems under consideration to be complex systems, have the potential for self-organisation. This capability leads to new and different levels of order. Instead of the strong form of control, and indeed coercion, that is an inherent property of the current hegemonic system, focus should change to a mode of operation that relies on parameter setting (Lim & Ikenberry, 2023).

Amplify the voices of the margin: The hegemonic system is currently designed to suppress the voices of the margin, since the margin presents a threat that would curtail its imperialistic ambitions. If the voices of the margin are amplified, these voices have a mitigating effect on the hegemonic character of the system. This is similar, but not identical to the concept of polyphony (Cholidi, 2022). In the case of science, a greater diversity of voices need to be brought in and encouraged on the various philosophical traditions – this would include those based on Indian, Chinese, and Islamic civilisations, as well as the diverse indigenous traditions of the world that have been assigned to the margins.

Become more progressive: Scholarship needs to take on somewhat of a bolder character, in the sense that young researchers should not be straightjacketed by what their supervisors, advisors, academic sponsors and departments consider to be appropriate scholarship within the narrow hegemonic frame. It is while they are in their prime that they should be encouraged to be more speculative, exploratory and tentatively adventurous in their thinking. Presently, it is only after researchers have succeeded in the hegemonic hierarchy, that such speculative, discovery-driven approaches are tolerated. Young researchers are currently discouraged – whether advertently or inadvertently, covertly or overtly – from going against the mainstream, and when they do, they often find it challenging to get their work to see the light of day. As a result, the current system encourages backward-looking research, centred on the repetition of hegemonic paradigms, as opposed to future-focussed work. This drastically narrows possibilities for ground-breaking work.

From law to hypotheses: Building on this, in the current hegemonic system, a researcher is often only able to get work published and thus gain credibility, if the focus of their work is on claims that are closer to theory or law, rather than on as-yet untested hypotheses. This is another sure-fire way of ensuring that scholarship remains staid and impoverished. An ecosystem metaphor of biodiversity is perhaps appropriate here: scholars of the sciences should nurture all kinds of saplings that could grow in a dynamically interacting ecosystem of ideas, hypotheses, theories and laws. Pre-occupation with the validation and justification end of the continuum of current theoretical claims, tends to encourage at the limit what Indian scholar and environmentalist Vandana Shiva terms in a different context as the "mono-culture of the mind" (Stapleton, 2020). A playful, discovery-oriented approach to scholarship can counter this since it allows the generation of theoretical concepts and nurtures what may be seen as 'half-baked ideas' into sound hypotheses that may develop over time into more robust theories. this chapter is an example of such a kind of playfulness; the presentation of the

A Clinical Model

Innovative approaches for inclusive scholarship in system science

Clinical model for inclusive scholarship

Key indicator	Existing protocol	Proposed modification	Clinical steps
Western Centric dominant hegemonic systems	Universal acceptance, use and application of western centric Science Systems	Integration of scholarship and scientific studies from a diverse range of society, culture and geographical locations	Establish local, national and continental and inter-continental relationships/ networks between scholars Create national and continental task teams to advance an inclusive system sciences scholarship
Playing with boundaries	The use of western and universal system sciences by scholars who adopt a systems approach that is seen fit for the purposes of development	The incorporation of scholarship and scientific systems from a diverse range of society, culture and geographical locations	Creating diverse and common practices that can be adopted throughout local, national and continental and inter-continental scientific systems that will allow diversification and development for future scholars

Key indicator	Existing protocol	Proposed modification	Clinical steps
Transparency of the ideological system	The use of exiting roadmaps of success on ideological systems that were used by Western scholars and scientific systems	To create a network and board of scholars with a common understanding of the necessity of transparency and its impact on the successful implementation of the ideological system	Develop professional bodies to establish a working group with associates who will function as a means of developing clear and concise information on ideological systems so as to ensures that scholars can access. relate to these systems
Disband the guile system	Dominant Universal acceptance, use and application of Western centric Science Systems	Development of board and accepting mindsets of scholars towards the future development of systems that make room for integration and accepted	Establish forms where scholars can interact, discuss and develop notions of systems sciences so as to disband current guile systems in place

Key indicator	Existing protocol	Proposed modification	Clinical steps
Self–organisation	Personal and opinionated views of scholars in the field of system sciences who expand on research based limited availability of support	The creation of networks, databases and information sharing of scholars of different continents and cultures	The development of databases and networks that scholars can readily have access to. Accessibility to guides and protocols by scholars in the field who have provided clarity and transparency of system sciences
Amplified marginalised voices	Ideological and scientific systems that are not being integrated into new and developed research by scholars due to marginalisation	The development of research teams and networks across national and international boundaries to create an awareness of marginalised voices	Create awareness of the need for inclusivity of practices that are marginalised by integration and adoptability methods established by scholars of local, national and continental and inter–continental bodies
Progressive	Hegemonic system is reconnoitered, and characteristics of related systems cogitated	Establishing local, national and continental and inter–continental relationships/ networks between scholars	Corresponding research and development of scholars in research to work together/ as teams to enhance the impact of system sciences on a global scale

nascent idea and concept of a hegemonic scholarship system still requires considerable development and refinement.

8. Conclusion

This chapter converges on understanding the concept of systems sciences and hegemonic systems in the course of theoretical debates in education and the impact of a dominant western centric system of scholarship on traditional philosophy. The discoveries as a result of the theoretical analysis indicate that the notion of hegemonic systems is reconnoitered, and characteristics of related systems cogitated. The system is thereafter utilised as an analytical stratagem to scrutinize contemporary scholarship to demonstrate ways in which it has turned out to be undermined and deficient. The proposal of the clinical model assists scholars in future research in developing progressive research that incorporates improved advanced scholarship, representative of a multi-faceted globalised world. Systems scientists need to play with the boundaries around what is considered rational knowledge, allowing for the entry of deviant ideas. This can be done by rejecting pseudo-science demarcation, dismissing academic propositions or assumptions resembling creationism, vitalism, anti-evolution or the notion of teleology, and disbanding the guile system. Self-organisation can lead to new and different levels of order, and amplifying the voices of the margin can help to achieve equity in science education. The voices of the margin should be amplified in science, and a greater diversity of voices should be encouraged. Scholarship should take on a bolder character, and young researchers should be encouraged to be more speculative, exploratory and tentatively adventurous in their thinking.

Young researchers are currently discouraged from going against the mainstream, making it difficult to get their work seen. The current hegemonic system encourages backward-looking research, centred on the repetition of hegemonic paradigms, and narrows possibilities for ground-breaking work. To counter this, scholars of the sciences should

nurture all kinds of saplings that could grow in a dynamically interacting ecosystem of ideas, hypotheses, theories and laws. this chapter is an example of such a kind of playfulness, but the presentation of the nascent idea and concept of a hegemonic scholarship system still requires considerable development and refinement.

References

Aljunied, K. (2022). *Shapers of SLAM in Southeast Asia.* New York : Oxford University Press. https://doi.org/10.1093/oso/9780197514412.001.0001

Bang, M., & Marin, A. (2015). Nature-Culture Constructs in Science Learning: Human/Non-Human Agency and Intentionality. *Journal of Research in Science Teaching, Vol. 52 (4)* , 530-544. https://doi.org/10.1002/tea.21204.

Bolashvili, K. (2015). The Influence of Eastern and Western Cultural Traditions on the Form Creation Processes in Avant-Garde Composers's Creative Work. *Musicology & Cultural Science, Vol. 11 (1)*, 50-54.

Cholidi, M. F. (2022). Cosmology in Lslam, Constructing islamization nature science. *Jurnal Al-Dustur*, 126-148. https://doi.org/10.30863/jad.v5i1.2572

Chrysostome, J., & Harris, T. G. (2021). *Civil Society and Peacebuilding in Sub-Saharan Africa in the Anthropocene .* Bandundu Town : Afes Press books.

Crouch, C. (2017). Neoliberalism, Nationalism and the Decline of Political Traditions. . *Political Quarterly, Vol. 88 (2)*, 221-229. https://doi.org/10.1111/1467-923X.12321

Eroglu, Y. (2023). Text Mining Approach for Trend Tracking in Scientific Research: A Case Study on Forest Fire. *MDPI journals*, 33-44. https://doi.org/10.3390/fire6010033

Frank, A. (2018, July 13). *Science vs. Religion: Beyond The Western Traditions.* Retrieved from National Public Radio: https://www.npr.org/sections/13.7/2014/07/13/329759036/science-vs-religion-beyond-the-western-traditions

Hashas, M., & Al-Khalib, M. (2020). Introduction: Modern Arab–Islamic Scholarship on Ethics . *BRILL*, 1-31. Retrieved from A Reflective Contextualization. https://doi.org/10.1163/9789004438354_002

Jacobs Lara, Coral , A., & Kathryn, C. (2022). Unsettling marine conservation: Disrupting manifest destiny-based conservation practices through the operationalization of Indigenous value systems. *Parks Stewardship Forum.* https://doi.org/10.5070/P538257522

Lim, D., & Ikenberry, J. (2023). China and the Logic of Illiberal Hegemony. *Journal of Security Study.* https://doi.org/10.1080/09636412.2023.2178963

Mapaling, C., & Hoelson, N. C. (2022). Humanising Pedagogy within Higher Education: A Ten-Year Scoping Literature Review. *SOLT in the South Africa*, 1-5. https://doi.org/10.36615/sotls.v6i3.197

Mcdonald, Z. (2023). Women generating, reproducing and disseminating texts in a Deobandi madrasa in South Africa. *HTS theological studies*, 1-8. https://doi.org/10.4102/hts.v79i1.7750

Nasr, S. H. (2022, May 6). *Islam and Modern Science.* Retrieved from Islam and Modern Science: http://web.mit.edu/activities/mitmsa/NewSite/libstuff/nasr/nasrspeech1.html

Peat, F. (n.d.). *Gentle Action: Surviving Chaos and Change (Book Proposal).* Retrieved from Frank David Peat: http://www.fdavidpeat.com/bibliography/essays/gentle.htm

Rifai, S. L. (2022, May 19). *A Critique of the Eurocentrism and Islamic Influence on Western Civilization.* https://doi.org/10.2139/ssrn.4097332

Samier, E. (2017). Islamic public administration tradition : historical, theoretical and practical dimensions . *Administrative Culture, Vol. 18 (1)*, 53-71. https://strathprints.strath.ac.uk/62946/.

Shamsaei, M., & Shah, M. H. (2017). Philosophical Study on Two Contemporary Iranian Muslim Intellectual Responses to Modern Science and Technology. *International Journal of Environmental and Science Education, 12*(4), 879-891.

Stapleton, S. R. (2020). Toward critical environmental education: a standpoint analysis of race in the American environmental context. *Journal of Environmental Education Research*, 155-170. https://doi.org/10.1080/13504622.2019.1648768

Taylor, B., Van Wieren, G., & Zaleha, B. (2016). The Greening of Religion Hypothesis (Part Two): Assessing the Data from Lynn White, Jr, to Pope Francis. *Journal for the Study of Religion, Nature & Culture, Vol. 10 (3)*, 306-378. https://doi.org/10.1558/jsrnc.v10i3.29011

Towey, A. (2023). Plato and Classical Civilisation A Level. *Journal of Classics Teaching* , 1-4. https://doi.org/10.1017/S2058631023000107

Yong, T. Y. (2022). The world bank's knowledge economy policy objectives in Cameroon's public universities 1993-2016: Case study of the University of Buea. *European Journal of Education Studies*, 123-134. https://doi.org/10.46827/ejes.v9i12.4555

Chapter 10

Adopting a Systems Thinking Philosophy to Improve Processes and Practices in Higher Education Institutions

Patrick Mbongwa Mhlongo [iD]
Durban University of Technology

Abstract

This article is based on a research project that was conducted to explore the applicability of systems thinking philosophy in the Universities of Technology (UoTs). Given the environment in which organisations operate, it becomes necessary for them to continuously improve their processes and practices to remain relevant and competitive. The environment in which orgnisations operate has been described as unpredictable. Organisations in all the sectors have to deal with chronic and complex challenges. UoTs are not immune from these challenges. Some of the challenges UoTs have to deal with include pressure from the industry, demands from the student body and also transformational requirements from the government. These are complex matters that require a holistic view or understanding from the decision-makers to provide effective responses or solutions. Systems thinking is considered as a critical philosophy to promote innovation, engagement and knowledge development in the higher education sector. Exploring an alternative management philosophy for higher education institutions was informed by a number of factors that have impacted the business of higher education. Hence it was important to conduct this study.

Systems thinking has been identified as an effective management approach that is effective in dealing with complex challenges. The concept of systems thinking is used predominantly in the private sector. Hence the study is exploring the application of systems thinking in the UoTs. A mixed methods approach was adopted to conduct the study. Cross-sectional survey design was employed as data was collected in a one-phase approach. This means both qualitative and quantitative data were collected at the same time. In line with the cross-sectional design, the sets of data were analysed separately but the interpretation was essentially done concurrently. As a result, convergent design was adopted. A self-administered questionnaire was administered to a sample of 322 participants. The sample was drawn from a total population of 1977 Durban University of Technology (DUT) and Mangosuthu University of Technology (MUT) permanent employees. A stratified and simple random sampling technique was adopted. The main findings indicated that functional silos are prevalent in the UoTs. As a result, people (university staff) focus on departmental and faculty goals instead of broader institutional goals. Participants were of the view that systems thinking would help UoTs to respond effectively to complex and unpredictable challenges. The results also highlighted opportunities and possible challenges for the application of systems thinking in the UoTs. This study provides insights to inform operational strategy and policy in the UoTs. Cross-functional collaboration has also emerged as a critical factor that should be promoted in the UoTs. Importantly, the study deals with the gap in the systems thinking literature where currently the focus is more on the private sector, and other sectors have received limited attention from researchers in terms of systems thinking.

1.   Introduction

This chapter is premised on the understanding that Higher Education Institutions (HEIs), like any other organisation in the public or private sectors, operate in an environment that is characterized or epitomized by what Rensburg et al.

(2014) call 'intense competition'. Therefore, this chapter is written from a Systems Thinking (ST) perspective in order to deal with complex challenges while remaining competitive in a globalized and interconnected world. The chapter captures Systems Thinking as an alternative management approach that could assist Higher Education Institutions in achieving their strategic goals. This approach helps decision-makers to consider a number of critical factors during the decision-making process. In their quest for excellence in research, participation in internationalisation, innovation and knowledge production, Systems Thinking is optimal for Higher Education Institutions. In essence, this chapter looks at ST in relation to research, internationalisation, innovation and knowledge production in HEIs, especially in Africa. Higher Education Institutions on the African continent are role-players in a global world. Analyzing higher education on the African continent, Kwandayi and Chivasa (2021) point out that very little has been done to study higher education as a discipline in Africa and as a result, the quality of higher education is poor. This point needs serious attention if HEIs in Africa are to be competitive locally and internationally. Van Assche et al. (2019) elaborate that as environments continuously change, management and those responsible for decision-making have to be adaptive. From the higher education perspective, universities are dealing with a wide range of challenges as they operate in an environment that is continuously changing (Dreguez et al., 2021).

This chapter demonstrates how Systems Thinking could be used to foster an organisational culture at the university that inspires every stakeholder to play their meaningful role in achieving institutional goals. In terms of institutional goals, the focus of this chapter is on four specific goals, namely innovation, research, internationalisation and knowledge production. These four specific goals are discussed in greater detail in the following sections. The discussion is in the context of the Systems Thinking approach. According to Meyer and Pretorius (2021), Systems Thinking is a perspective that takes into consideration that a system is made up of

various necessary and interrelated components in which the *relationships* between the components are as critical as the components themselves. Systems Thinking is defined by Hassan et al (2020) as a holistic approach that is used to understand how elements of a system interact and interrelate. This definition provides a basic understand of what ST is. In fact, elements of a system interact to achieve a common goal. According to Stroh (2015), ST is a team sport whereby stakeholders with diverse perspectives work together, sharing their aspirations, their viewpoints and experiences.

From a university perspective, interrelated components will be faculties, academic departments and administration, in a broad sense. In other words, emphasis is on the understanding that the components of a systems are interrelated, interconnected and they interact to achieve a common goal. In the Systems Thinking perspective, organisations are regarded as systems. This understanding demonstrates the link between ST and organisations. Higher Education Institutions are regarded as organisations that exist for a specific purpose in society. Moreover, universities are under constant pressure to meet the needs of their stakeholders. University stakeholders generally include government, students, parents, accreditation bodies, industry, funders, workers and councils. Systems Thinking can be used to deal effectively with complex challenges that cannot be solved using the traditional or conventional approach of reductionism (Meyer & Pretorius, 2021). Therefore, it can be argued that Systems Thinking is topical for HEIs. In addition, Brits (2011) concurs with the view of interrelated and interconnected elements that function as a whole, which is in fact applicable to universities as organisations.

This chapter provides practitioners, scholars and decision-makers with insights that provide a holistic perspective to deal with complex situations and allow for flexibility when there is a need. Davies and Jones (as cited in Walters, 2020) describe universities as organisations that are complex, dynamic and that should be able to adapt in an unpredictable environment. Therefore, the management

approaches adopted should assist universities in responding to the needs of their stakeholders and remain competitive. Internationalisation in higher education and the new trends are also some of the factors that require a holistic understanding of how universities should be managed. In the literature, the Systems Thinking philosophy is considered to be an effective management philosophy to deal with complex and unpredictable challenges in both the private and public sectors. Interdependence, interrelatedness and interactions are the core aspects of ST, and this understanding is critical for policy and strategy formulation. Moreover, this understanding is vital at the level of a university as an entity and also at a sectoral level (the higher education sector locally, nationally or globally). Traditional or mechanistic management approaches have proven to be ineffective in dealing efficiently with the kinds of demands that modern universities are facing. Walters (2020) agrees that the importance of change in higher education is being recognized and well-captured in higher education literature. Hence, Systems Thinking has been identified as a tool to manage such change effectively from a holistic thinking point of view. Walters (2020) further accentuates that educational institutions are dynamic organisations expected to change.

Effective management approaches are therefore critical for HEIs to remain relevant and successful in an environment that has become globalized. According to Webber (2018), universities are knowledge producers. Therefore, it is critical to create an internal environment where every unit within the university works towards a common goal. There are many key focus areas in terms of university operations where a sense of shared purpose becomes critical. Key to promoting a sense of a shared vision is to adopt the Systems Thinking concept. This is a concept that is predominantly used in the private sector but given the complex challenges faced by universities and the demands they have to respond to from various stakeholders, exploring alternative management approaches is critical. It is in this context that Systems Thinking and its applicability in higher education is being explored. This chapter begins

with highlighting the challenges and trends in the Higher Education sector, followed by a section that deals with unpacking the Systems Thinking concept generally, and in the context of Higher Education Institutions specifically. Finally, the chapter covers ST in the context of the key strategic areas of a university, as mentioned earlier in this chapter.

2. Systems Thinking as a catalyst for collaboration beyond functional boundaries

This section provides the basis for Systems Thinking being considered as an alternative management concept in higher education. According to Stroh (2015), conventional thinking is suitable only for simple or linear situations, whereas ST is for complex and non-linear situations. Systems Thinking allows stakeholders to play their roles effectively for the success of the whole system (organisation), instead of only for their benefit as individuals (Stroh, 2015). This creates a conducive environment for stakeholders to work as a collective and to collaborate beyond functional boundaries. On the other hand, organisational silos hinder the successful sharing of information and necessary resources for an organisation to become successful and remain competitive (Bento et al., 2020). These authors further state that in essence, silos create barriers to communication across functional areas within organisations. Van Niekerk (2016) acknowledges that reductionist and mechanistic thinking is prevalent in university environments. It is clear that ST is the only option to succeed in innovation, internationalisation, research and other key focus areas in a university context. Cilliers and Greyvenstein (2012) succinctly state that silos in organisations not only refer to what is known as conscious structure, but also relates to the unconscious state of mind (mentality). Therefore, the silo mentality has a negative impact in terms of cross-sectional collaboration and organisational effectiveness. In essence, conditions in which organisations operate require a multi-perspective approach, which could be achieved through Systems Thinking. An overarching ST philosophy is relevant to bringing various units within the organisation to

work together. Hence, Sivam et al. (2019) posit that individuals with the necessary knowledge and skills play a role in generating innovative initiatives. In addition, they argue that the goal of each organisation is to remain competitive and conquer competition.

3. Tenets of Systems Thinking

Tenets of the Systems Thinking philosophy include interconnectedness, interactions and interrelationships. The understanding of these tenets is critical for the practical application of Systems Thinking in an organisation.

Interconnectedness

In Systems Thinking, everything is connected to everything else, and this perspective provides a holistic worldview (Sterman, 2002). It has also been posited by Oosthuizen and Manzini (2022) that a system comprises interconnected components. At a practical level, this understanding is critical because what happens in one component of a system will essentially have an impact on other components of the system. This understanding is also important for decision-making and policy formulation. Systems Thinking is also an effective philosophy to manage change at an organisational level.

Interactions

System elements interact to achieve a common purpose. In an organisational context, various departments or units should work together to achieve the broader goals of the organisation. This understanding fosters a culture of knowledge-sharing across functional boundaries. Knowledge-sharing is critical for an organisation to achieve competitiveness.

Interrelatedness

Systems Thinking recognizes systems as a collection of critical elements that are interrelated and in which the relationships between such elements are important (Meyer & Pretorius,

2021). This aspect of ST promotes a holistic understanding of the operations in organisations and their impact on society and other social systems. It is eloquently stated by Haynes et al. (2020) that interrelated and independent parts of a system are linked by a common goal. This tenet serves as catalyst for promoting a sense of shared purpose.

4. Application of Systems Thinking in the context of Higher Education

This section discusses Systems Thinking and higher education at two levels. The first level deals with operationalizing ST in a university as an organisation. The second level discusses ST in the context of a university as a role-player in local, national as well as international higher education environments. Universities in Africa are not only competing amongst themselves on the continent, as Pamella (2021) argues that African universities compete with universities globally as well. Through the application or adoption of Systems Thinking, Higher Education Institutions are able to improve their services and differentiate themselves from their competitors (Dunnion & O'Donovan, 2014). The authors further highlight that functional specialization in the university context creates challenges as there is no cross-sectional collaboration. Mhlongo (2021) acknowledges that the culture of functional silos is prevalent in UoTs, which are part of the higher education landscape. Systems Thinking opposes traditional management approaches. As a result, the command-and-control approach is in many ways ineffective to deal with the complex challenges that require a systematic or holistic understanding and holistic intervention (Dunnion & O'Donovan, 2014).

Given the new trends in the higher education landscape globally, institutions of higher learning are expected to fulfil a wide range of new roles beyond their traditional functions (Ntshoe & Selesho, 2016). Being innovative is certainly important for HEIs to meet the diverse needs of their diverse stakeholders. According to Bess and Dee (2014), researchers

have recommended reforms in structure and changes in organisational culture in order to improve organisational effectiveness. Bento et al. (2020) acknowledge that it becomes impossible to achieve organisational goals where there are organisational silos.

It has been common practice for HEIs to adopt management concepts used in the private sector. This is influenced by a number of factors, for example funding, meeting the needs of stakeholders and remaining competitive. Higher Education Institutions are regarded as organisations and in a Systems Thinking context, organisations should be viewed as systems. This understanding helps members of the organisation to appreciate that in fact various units, departments or sections in an organisational context should work together to achieve a common goal. Systems Thinking could thus be used in HEIs as an overarching philosophy to eradicate compartmentalization and functional silos. The following sections demonstrate the influence of ST in helping HEIs to improve their key focus areas. These include innovation, research, internationalisation and knowledge production.

5. Gaining a competitive advantage through Innovation in Higher Education Institutions

Innovation is critical to remaining competitive, achieving organisational effectiveness and sustainability. According to Sivam et al. (2019) innovation is a key resource in gaining a competitive advantage and in assisting each organisation to be successful. Hence, Calitz et al. (2018) emphasise that organisations, including Higher Education Institutions, should do everything possible to ensure sustainability. Fomunyam (2020) opines that HEIs in Africa have a role to play in generating innovative ideas for operating effectively in an interdisciplinary environment. This is crucial for flexibility and being able to adapt to a continuously changing world. According to Bester (2017), UoTs are under constant pressure to produce graduates who are entrepreneurially minded. This

is generally the case even with the other types of HEIs. In a university context, innovation is critical at the level of the university processes and practices, as well as at the level of the quality of graduates. This is to ensure that university graduates are innovative. Hence, Owusu-Agyeman (2021) argues that the concept of innovation remains topical for Higher Education Institutions as they need new ideas to continue improving the processes and practices to meet the needs of their stakeholders. This becomes important as there are many factors that force HEIs to be innovative. According to Ruano-Borbalan (2019), innovation in higher education has become a global goal. An overarching Systems Thinking philosophy is topical in order to create a conducive environment that promotes participative processes to enhance innovation in Higher Education. Principles of ST provide a conducive environment for innovative ideas to be shared across the organisation. Where Systems Thinking is adopted, knowledge is easily shared and members of the organisation collaborate beyond functional boundaries. This point is espoused by Gerstein and Friedman (2016): that the problem with functional silos is that it becomes difficult to share knowledge and collaborate beyond functional boundaries. Systems Thinking creates a solid foundation for every stakeholder, unit and department to work towards a common goal. Although innovation is one of the key focus areas in a university, Jakovljevic (2019) argues that South African universities still have barriers that hinder innovation. However, innovation is vital for economic growth, responding effectively to societal challenges, and the formation of new industries (Sivam et al., 2019). This highlights the important role that Higher Education Institutions are to play in terms of innovation. Mashau et al. (2018) posit that universities must become innovation facilitators as they should provide a conducive environment to explore and exploit entrepreneurial activities that lead to the development of new products, as well as improved processes.

6.   Research as a key strategic goal of a university

There is a strong emphasis on research and improving research output in Higher Education Institutions. According to Overton-de Klerk and Sienaert (2016) research plays a critical role in reputation-building for HEIs, as well as in terms of university rankings. Kwandayi and Chivasa (2021) raise a critical point that universities from Africa have not been doing well in terms of university rankings globally. They also acknowledge that research as a field of study has received necessary attention in higher education (Kwandayi & Chivasa, 2021). In addition, Overton-de Klerk and Sienaert (2016) argue that as a result, research remains a critical element of a university's brand value. Hence, HEIs are regarded as places for knowledge development, research and community development (Salajan, as cited in Owusu-Agyeman, 2021). Moreover, research plays an important role in providing useful information for decision-making purposes in Higher Education and other sectors. This is a point espoused by Weber (2018). Hence, research in higher education should broaden the narrow understanding of the multifaceted role of higher education. This broader understanding should take into consideration other critical areas in which higher education plays a role, including societal and economic factors. As Bester (2017) succinctly states, Higher Education Institutions are being judged by the ways in which they respond to the social and economic needs of society. Various stakeholders rely on university research to provide the necessary knowledge for economic growth. Therefore, Systems Thinking can play a role in promoting research activities across all sectors of a university. Through research, it is possible to find solutions to problems. In line with Systems Thinking principles, Naidoo et al. (2019) suggest that research should be implemented using inter-disciplinary and trans-disciplinary partnerships. Goujon et al. (2016) emphasise that the relevance of higher education is critical as it plays a role in the development of scientific knowledge for economic and social development.

New research agendas are being defined around the green and blue economies and the fourth industrial

revolution. These can provide tangible benefits when research is implemented through inter-disciplinary and trans-disciplinary research partnerships (Naidoo, et al., 2019).

7.   Universities as key role-players in a globalized, interconnected world

Student mobility remains a critical measure of internationalisation and there has been an increase in student mobility in all regions (Muyaka, 2019). According to Haarnen and Saarti (2020), higher education in Africa has also been integrated into the global higher education landscape. This is a phenomenon that involves many stakeholders and a number of other factors. The internationalisation of higher education can be described as a complex phenomenon because of the number of stakeholders who should play a role, namely scholars, students, governments or host nations, academic institutions and parents (Kumar & Aithal, 2020). Other factors that should be considered during the decision-making stage include infrastructure, industry interaction, technology, employee expertise and innovative teaching methods (Kumar & Aithal, 2020).

Systems Thinking therefore becomes a philosophy to unify all these stakeholders to work towards a common goal. In this context, ST becomes relevant at the level of each stakeholder and also at the level of stakeholders working as a collective to deal with the successful internationalisation of higher education. The successful internationalisation of higher education depends on each stakeholder playing their part effectively and taking into consideration all other important factors. Systems Thinking becomes the only management philosophy to promote holistic thinking in the context of the internationalisation of higher education.

It is through Systems Thinking that each stakeholder understands the bigger picture. The general understanding is that the world is interconnected, and Higher Education Institutions are made up of interconnected administration and academic sectors. Interconnectedness, interrelatedness

and the interaction of various parts or elements of a systems are what ST is about. These are the principles of the Systems Thinking philosophy. French and O'Leary (2017) describe higher education as something that is being "marketised". They further postulate that Higher Education Institutions across the world are under constant pressure to respond to globalization, the massification of higher education and dealing with complex demands from stakeholders. According to Kumar and Aithal (2020), the quest for quality and innovation in higher education has been identified as a major factor for the internalisation of higher education. Furthermore, Mlambo et al. (2020) are of the view that globalization and the world have become interconnected, which has resulted in rising student numbers as they exploit study opportunities internationally. Kwandayi and Chivisa (2021) assert that HEIs should be managed effectively in order to meet the needs of society.

8. Understanding the role of Higher Education Institutions in the development of new knowledge

In an era characterized by complexity and uncertainty, Hurst and Du Ploy (2021) aver that the role of higher education should not be a focus only on the measurable outcomes of learning, but also on producing graduates who are responsible citizens. In other words, the role of higher education is beyond empowering graduates with technical and theoretical expertise. Higher Education Institutions are in fact regarded as enterprises that produce new knowledge. Jung (2020) describes knowledge as a critical driver for economic growth, especially in a global environment. He further argues that HEIs play a crucial role in knowledge production. Powell et al. (2017) describe a university as an entity that plays a crucial role in constructing and transmitting knowledge. Hence, it is necessary to consider a number of factors when the university curriculum is being re-calibrated and renewed. Meeting the needs of multiple stakeholders has become a key factor for HEIs. To do this successfully, inter-disciplinary and multi-

disciplinary practices should be considered during strategy formulation and decision-making. Looking at Systems Thinking in the context of managing change, Banerjee and Lowalekar (2021) emphasise that this could be achieved through the co-operation of multiple stakeholders.

The adoption of Systems Thinking is a strategic option for innovation, knowledge production and research in the Higher Education sector. Those in positions of authority in Higher Education Institutions need to have the requisite skills and qualities to succeed in a higher education landscape that has nefariously complex and unpredictable challenges (Walters, 2020). According to Lee and Kuzhabekova (2019), those who are responsible for policy development and those who lead institutions rely on research and new knowledge to gain national and institutional visibility. Highlighting the role of higher education in the development of new knowledge, Lee and Kuzhabekova (2019) point out that knowledge plays a role in ensuring economic growth and social development. Hence, Systems Thinking will serve as a catalyst to facilitate the understanding that university operations have impacts beyond producing graduates. In addition, HEIs play a role in producing new knowledge to solve societal problems. Manthalu and Waghid (2019) assert that higher education in Africa is critical in order to achieve global competitiveness.

9.   Conclusion

This chapter provided necessary insights for every stakeholder and decision-maker in the higher education landscape to appreciate Systems Thinking as an effective alternative to reductionism. It is a philosophy that deals effectively with complex matters. In the words of Stroh (2015), Systems Thinking creates a sense of shared purpose amongst parts or elements of complex systems. In ST language, everything in a system is connected. Lynch (2017) is of the view that the education system is struggling to effectively address the needs of a hyper-connected society. Sadly, this hyper-connected society is continuously evolving. According to Jhaj (2019),

institutions of higher learning have to deal with complex challenges which are unique in the history of higher education. These challenges include competition and transformation. Systems Thinking is therefore relevant to achieving organisational effectiveness in all the key aspects of university operations. It provides a holistic understanding of how various departments and faculties need to function collaboratively in order to achieve common and broader university goals. Being innovative, increasing research output, producing knowledge and becoming an effective player in a global world are some of the key focus areas for universities. Therefore, Systems Thinking is relevant to understanding the interconnectedness of every aspect of a university's operations. Gerstein and Friedman (2016) make the valid point that flexibility is vital for organisations to survive in the digital age. This chapter discussed Systems Thinking in order to inspire holistic thinking in addressing the complex challenges in higher education. In a turbulent higher education landscape, recycling ineffective management practices is not a strategic option. Hence, Pretorius (2019) posits that it is important to approach performance improvement in an organisation from a systems and business perspective. The author of this chapter is of the view that Systems Thinking could be used to foster a culture of innovation, research and the development of new knowledge in Higher Education Institutions. In essence, the author believes that through Systems Thinking, Higher Education Institutions would be able to improve their processes and practices to remain relevant in a globalized space. Steynber et al. (2020) concur that the management approaches used in Higher Education Institutions are inappropriate, therefore flexibility is critical. In essence, this suggests a need to adopt management approaches that allow for flexibility in responding to challenges that are complex and unpredictable. Mhlongo (2021) acknowledges that the adoption of Systems Thinking would in fact be a strategic option for Higher Education Institutions.

References

Banerjee, D., & Lowalekar, H. (2021). Communicating for change: a systems thinking approach. *Journal of Organisational Change*, *34*(5), 1018-1035. https://doi.org/10.1108/JOCM-10-2020-0325

Bento, F., Tagliabue, M., & Lerenzo, F (2020). Organisational silos: A scoping review informed by a behavioural perspective on systems and networks. *Societies*, *10*(56), 1-27. https://doi.org/10.3390/soc10030056

Bess, J .L., & Dee, J.R. 2014. *Bridging the divide between the faculty and administration: A guide to understanding conflict in the academy.* Routledge. https://doi.org/10.4324/9780203758458

Bester, M. (2017). Educating entrepreneurial mind-sets at a university of technology: Curriculum enablers and constraints of selected programmes. *Journal of New Generation Sciences*, *15*(1), 188-206.

Brits, H.J. (2011). The integration of quality management function with a university: A systems approach. *South African Journal of Higher Education*, *25*(7), 1288-1297.

Cilliers, F., & Greyvenstein, H. (2012). The impact of silo mentality on team identity: An organisational case study. *South African Journal of Industrial Psychology*, *38*(2), 1-9. https://doi.org/10.4102/sajip.v38i2.993

Calitz, A., Bosire, S., & Cullen, M.(2018). The role of business intelligence in sustainability reporting for South African higher education. *International Journal of Sustainabilty in Higher Education, 19*(7), 1185-1203. https://doi.org/10.1108/IJSHE-10-2016-0186

Dreguez, T., Loureiro, P., & Ferreira, I. 2021. Higher education as an engine of entrepreneurial leadership skills in a digital area transformation. *Proceedings of the European Conference on Management, Leadership & Governance*, 152-161.

Dunnion, J., & O'Donovan, B. (2014). Systems thinking and higher education. The Vanguard Method. *Systemic Practice and Action Research*, 27, 23-37. https://doi.org/10.1007/s11213-012-9258-4

Fomunyam, K.D. (2020). Theorising the itinerant curriculum as the pathway to relevance in African higher education in the era of the fourth industrial revolution. *International Journal of Education and Practice*, 8(2), 248-256. https://doi.org/10.18488/journal.61.2020.82.248.256

French, A., & O'Leary, M. (2017). *Teaching excellence in higher education: Challenges, Changes and the teaching excellence framework*. Emerald. https://doi.org/10.1108/9781787147614

Gerstein, M., & Friedman, H.H. (2016). Rethinking higher education: focusing on skills and competencies. *Psychosociological Issues Human Resource Management*, 4(2), 104-121. https://doi.org/10.22381/PIHRM4220165

Goujon, A., Haller, M., & Kmet, B. M. (2016). *Higher education in Africa: Challenges for development, mobility and cooperation.* Cambridge.

Haarnen, A., & Saarti, J. (2020). Enthusiastic academic and support service staff as an agent for change: A case study based on a project in African higher education institutes. *The Electronic Journal of E-learning*, 18(1), 1-12. https://doi.org/10.34190/EJEL.20.18.1.001

Hassan, I., Obaid, F., Ahmed, R., Abdelrahman, L., Adam, S., ,Adam., O., Yousif, M.A., Mohammed, K., &Kashif, T.(2020). A systems thinking approach for responding to the COVID-19 pandemic. *East Mediterr Health Journal*, 26(8),872-876. https://doi.org/10.26719/emhj.20.090

Haynes, A., Rychetnik, L., Finegood, D, Irving, M., Freebairn, L., & Have, P. (2020). Applying systems thinking to knowledge mobilization in public health. Health Research Policy and Systems. *Health Research Policy and System, 18,* 1-19 . https://doi.org/10.1186/s12961-020-00600-1.

Hurst, A.M., & Du Ploy, B. (2021). Higher education in an Era of complexity: The tributaries Project as a higher education heterotopia. *South African Journal of Higher Education*, 35(2), 73-92. https://doi.org/10.20853/35-2-3976

Jakovljevic, M. (2019). Criteria for empowering innovation in higher education. *Africa Education Review*, 16(4), 53-71. https://doi.org/10.1080/18146627.2017.1369855

Jung, J. (2020). The fourth industrial revolution, knowledge production and higher education in South Korea. *Journal of Higher Education Policy and Management*, 42(2), 134-156. https://doi.org/10.1080/1360080X.2019.1660047

Jhaj, S. (2019). Innovation strategies to address challenges facing higher education. *International Journal of Design in Society*, 13(1), 21-33. https://doi.org/10.18848/2325-1328/CGP/v13i01/21-33

Kumar, S., & Aithal, P. S. (2020). Internationalisation of Higher Education: A stakeholder approach. *Scholedge International Journal of Business Policy and Governance,* 7(6), 84-93. https://doi.org/10.19085/sijbpg070601

Kwandayi, H., & Chivasa, S. (2021). The need to study higher education as a discipline in Africa to inform policy and practice. *Journal of African Education*, 2(1), 17-38. https://doi.org/10.31920/2633-2930/2021/v2n1a1

Lee, J.T., & Kuzhabekova, A. *(2019).* Building local research capacity in higher education: A conceptual model. *Journal of Higher Education*, 41(3), 342-357. https://doi.org/10.1080/1360080X.2019.1596867

Lynch, M. (2017). *Understanding key education Issues: how we got here and where we go from here.* Routledge. https://doi.org/10.4324/9781315268811

Manthalu, C.H., & Waghid, Y. (2019). Interrogating a cosmopolitanism of african higher education. *South African Journal of Higher Education*, 33(2), 1-15. https://doi.org/10.20853/33-2-3526

Mashau, P., Fields, Z,. & Nyawo, J.C. (2018). Evaluation of South African Universities' collaborations as drivers of entrepreneurship. *African Renaissance*, *15*(4), 139-165. https://doi.org/10.31920/2516-5305/2019/V16n1a8

Meyer, J.A.M., & Pretorius, L. (2021). A systems thinking conceptual model for value creation in the African Cement Market*. South African Journal of Industrial Engineering*, *32*(3), 10-18. https://doi.org/10.7166/32-3-2608

Mhlongo, P. M. (2021).The applicability of systems thinking in universities of technology (UoTs) in KwaZulu-Natal [Unpublished doctoral thesis]. Durban University of Technology, Durban, South Africa

Mlambo, V.H., Ogunnubi, O., & Mlambo, D. N. (2020). Student mobility, brain drain and the internationalisation of higher education in Southern Africa*. African Journal of Development Studies*, *10*(2), 59-82*.* https://doi.org/10.31920/2634-3649/2020/10n2a3

Muyaka, J. (2019). The status of internationalisation of higher education in Kenya: The case of university diversity*. Journal of Emerging Trends in Educational Research and Policy Studies*, 10(2), 106-114*.*

Naidoo, M., Samuel, M. A., Green, P. E., Chakoma, I. C., Govender, S., O'Donoghue, S., Phaswana, I., Naidoo, C., Hoque, M., Kader, A. & Gerwel-Proches, C. N. (2019). Insights on doctoral research. Graduate School of Business and Leadership, University of KwaZulu-Natal, Durban, South Africa.

Ntshoe, I M., & Selesho, J. M. (2016). Shifting sands on differentiation and specialization in higher education in South Africa*. South African Journal of Higher Education,* *30*(2), 164-183. https://doi.org/10.20853/30-2-598

Oosthuizen, R., & Manzini, D. (2022). Systems thinking for the digital economy: A sociotechnical perspective. *South African Journal of Industrial Engineering*,*33*(3),262-273. https://doi.org/10.7166/33-3-2801

Overton-de Klerk, N., & Sienaert, M. (2016). From research excellence to brand relevance: a model for higher education reputation building. *South African Journal of Science*, *112*(5), 47-54. https://doi.org/10.17159/sajs.2016/20150365

Owusu-Agyeman, Y. (2021). Transformational leadership and innovation in higher education: a participative process approach. *International Journal of Leadership in Education*, *24*(5), 694-716. https://doi.org/10.1080/13603124.2019.1 623919

Pamella, D.A. (2021). Fourth Industrial Revolution and higher education in Africa: A systematic review and implications. *Proceedings of the European Conference on e-learning*, 130-138.

Powell, J.J.W., Baker, D.P., & Fernandez, F. (2017). *The century of science: The global triumph of the research university.* Emerald. https://doi.org/10.1108/S1479-3679201733

Pretorius, P.J. (2019). A systems approach to operational and decision-making. *South African Journal of Industrial Engineering*, *30*(3), 77-89. https://doi.org/10.7166/30-3-2228

Rensburg, S.M., Nieuwenhuizen, C., & De Bruyn, H. (2014). Inter-organisational relationships with large enterprises as a source of competitive advantage for small and medium enterprises. *Journal of Contemporary Management*, *11*, 613-636.

Ruano-Borbalan, J. (2019). Innovation in higher education: Actors, policies and pedagogical effect. *European Journal of Education. 54*(4), 493-498. https://doi.org/10.1111/ejed.12371

Sivam, A., Dieguez, T, Ferreira, L. P., & Silva, F.J.G. (2019). Key settings for successful open innovation arena. *Journal of Computational Design and Engineering*, *6*(4), 507-515. https://doi.org/10.1016/j.jcde.2019.03.005

Sterman, J.D. (2002, May 20-30). Systems dynamics: Systems Thinking and modeling for a complex world .Internal symposium, Cambridge. https://doi.org/10.1109/EMR.2002.1022404

Steynber, L., Liu, B., Li, Y., & Grundling, J.P. (2020). Global and Local Co-Operative Higher Education Governance: Implications for South Africa. *Journal of Public Administration, 55*(2), 158-175.

Stroh, D.P. (2015). Systems thinking for social change: a practical guide to complex problems, avoiding unintended consequences and achieving lasting results. Chelsea Green.

Van Assche, K., Verschraegen, G., Valentinov, V., & Gruezmcher, M. (2019). The social, the ecological and the adaptive Von Bertalanffy's general systems theory and the adaptive governance of social– ecological system. *Systems Research and Behavioral Science,* 36,308-321. https://doi.org/10.1002/sres.2587

Van Niekerk, P. (2016). Performatitivity and authenticity in higher education: From reductionist to ecological thinking. *South African Review of Education,* 22, 27-45.

Walters, C. (2020). The complexity of leadership in South African Universities. *Higher education Research and Development*, 40(6), 1326-1341. https://doi.org/10.1080/07294360.2020.1811644

Weber, K.L (2018). *Building capacity in institutional research and decision support in higher education.* Springer. https://doi.org/10.1007/978-3-319-71162-1

Chapter 11

Re-Engineering Sociological Constellations for Higher Education in South Africa

Kehdinga George Fomunyam 🆔
Durban University of Technology

Nnenna Fidelia Ezeonwuachusi 🆔
Stadio School of Education

Abstract

Higher education in South Africa has experienced a number of challenges for the past three decades: from the days of apartheid to post-apartheid South Africa, to the challenges of transforming the higher education landscape. The merger of several South African higher education institutions in 2004 created a plethora of challenges to add to the already existing ones. These challenges were political, sociological, structural and fiscal in nature. The desire to address these challenges has in a way created an epistemological backlog where access to higher education has increased drastically but epistemological access remains a challenge. These amongst other things fuelled the decolonisation movement which demanded for the decolonisation of knowledge. However, the decolonisation of knowledge amongst other things cannot be effective or complete without a re-engineering of the sociology of education. this chapter articulates a pathway for the re-engineering of the sociology of education by articulating four sociological constellations.

1.   Introduction

Higher education in South Africa has been construed as a public good and a tool for redress against the backlog of apartheid South Africa. This special function necessitates the drive by the higher education sector to be responsive to both the higher education stakeholders and the communities in which these educational institutions are found or the nation at large. With national quality assurance frameworks dictating the need for fitness for purpose, value for money and transformation, the higher education sector or higher education institutions have more to respond to amidst trying to re-invent itself and articulate a path for itself in the days ahead. This drive to forge a new path has seen the emergence of different waves in the higher education sector like the mergers of 2004, the transformation agenda, the FeesMustFall movement and the decolonisation era. Amidst all these moves, only the decolonisation movement has attempted a critical engagement with knowledge and the philosophical as well as sociological processes that underpin the construction, deconstruction, and reconstruction of knowledge in South African higher education institutions. While the decolonisation movement is taking its turn and the higher education sector is warming up to it, there is need for critical engagement on a variety of issues in higher education and how these all work together to produce a particular higher education pathway. The impact of global movements like globalisation, internationalisation of higher education, curriculum internationalisation, cross-border or transnational higher education and curriculum, and higher education partnerships, amongst others, on the higher education sector in South Africa has also exposed several lapses in relation to contextual responsiveness and the underpinning principles behind knowledge construction, reconstruction and dissemination in the higher education arena. With the understanding that higher education is all about educational encounters which itself is engendered by the knowledge construction and reconstruction processes within the university, be it in a classroom or within the higher education environment, it becomes critical to reconsider

the basis of the knowledge construction process especially in the face of calls for the decolonisation of the curriculum, knowledge and education in general. However, to do that, it is critical to conceptualise the sociology of education and the backdrops from which this chapter argues so as to articulate a pathway in the higher education sector.

2.   Conceptualising Sociology of Education

Elias (1978) argues that sociology offers an understanding of the social world and how it operates within the larger stratosphere of the framework of life. Sociology is a critical look at human social relationships and institutions. This means that sociology's subject matter is far-reaching and diverse, ranging from crime to religion, from the family to the State, from the divisions of race and social class to the shared beliefs of a common culture, and from social stability to radical change in whole societies. Sociology therefore becomes the study of life and how it is lived in the society. It is the drive to understand how human action and consciousness both shape and are shaped by surrounding cultural and social structures. Ballantine, Hammack, and Stuber (2017) add that sociology which aims at studying and analysing is an exciting and illuminating field of study that analyses and explains important matters in our personal lives, our communities, and the world. At the personal level, sociology investigates the social causes and consequences of such things as romantic love, racial and gender identity, family conflict, deviant behaviour, aging, and religious faith. At the societal level, sociology examines and explains matters like crime and law, poverty and wealth, prejudice and discrimination, schools and education, business firms, urban community, and social movements. At the global level, sociology studies phenomena such as population growth and migration, war and peace, and economic development. Matheson (2014) argues that education is the process of learning, unlearning and relearning or the process of knowledge construction within a particular setting. The process of construction evolves to relationships as one individual (such as a lecturer) is there to facilitate or co-

create knowledge with another (the student). This makes the process of knowledge creation a social one. This is confirmed by Durkheim (1956, pp. 70-71) who argues that

> "it is society as a whole and each particular social milieu that determine the ideal that education realizes. Society can survive only if there exists among its members a sufficient degree of homogeneity; education perpetuates and reinforces this homogeneity by fixing in the child from the beginning, the essential similarities that collective life demands...Education is then the only means by which society prepares the essential condition of its very existence... That education consists of the methodical socialisation of young generation".

The sociology of education therefore is strategically placed at the heart of education. Education does not function or operate in a vacuum and to fully understand its significance and ability to shape the society, it is vital to analyse the society to show its strengths and weakness and plan the educational programmes that would address the weaknesses and promote or strengthen its strengths. The education system in any country must be contextually responsive by taking into consideration the needs, demands and aspirations of the society for it to function properly. Sociological of education is therefore the study of the relations between education and the society. Rao and Singh (2018) add that sociology of education is concerned with how the economic, political, religious, social and cultural forces shape educational aims, methods, institutions, administration and curricula. Society both shapes and is shaped by education, making education and the society integrally related. For education to be responsive, there is a need for constructivist knowledge of the society, its systems and how it functions so education graduates can fully fit within the society. At a time like this in South African higher education where responsiveness is the talk of the day, sociology of education becomes critical to sound and responsive education, especially because responsiveness is built on context, which is itself a product of the society and is made sense of through sociology or the sociology of education.

Sociologists like Max Weber, Karl Max, Herbert Spencer, and Emile Durkheim have all contributed significantly to the development of sociology of education and in the shaping of the field of higher education from a sociological standpoint. Wexler (2017), Young (2002) Bennett and LeCompte (1990), and Clark (1973) argue that there are eleven key constructs of sociology which have shaped the direction of sociology of education. These key ideas are at the centre of sociology of education and they are underpinned by particular views of the society. The first centres around the norms and values students learn in school and how they influence the kind of citizens they eventually become in the workplace or in the society. Since education is neither innocent nor exists in a vacuum, but rather aims at shaping the citizens and the future of the nation in a particular direction, it follows that how the norms and values enshrined directly or indirectly in the education system are a direction function of the vision of the society that those in power want to see. This shaping is done through policies, guidelines and procedures and order funding requirements (Maton, 2013).

The second construct centres on social and cultural capital and this is orientated by the skills, knowledge and attitudes associated with the dominant culture, possessed by the middle classes, which give middle class parents and children an advantage in life. Karl Marx theorised cultural capital as the cultural architecture brought about by social class which allocates certain levels or kinds of advantage to those who belong to such classes. It explains why middle class students turn to achieve more than working class students do. As part of the dominant culture, middle class students have an automatic advantage over working class students because they share the culture of the university. Their language is like that of teachers (also middle class) and their values correspond more closely to those of the university. This 'cultural capital' enables middle class families to pass on their superior position to their children and in so doing, reproduce class inequalities (Blakemore & Cooksey, 2017).

The social class to which tudentt belongs determines their cultural heritage which directly impacts the knowledge construction process and their meaning making abilities. The third is cultural deprivation which stands as an antithesis to cultural capital. Within this notion, some groups of people, most often those of the lower social classes, have inferior norms, values, skills and knowledge which hold them back in life. Their very circumstances act as a deterrent and deprives them of opportunities to engage at different levels both in the knowledge construction process, as well as in the improvement of their socio-economic standing. Cultural deprivation often produces a negative effect on the education of working-class students because they lack language skills or possess poor language skills which make them struggle in most higher education institutions in South Africa where the medium of instruction is English. Students who lack cultural capital struggle to understand what they are taught, and the fact that working class parents do not value education means that their children are less likely to stay on at school post-16 (Arum, Beattie, & Ford, 2010). Exogenous privatisation and marketisation in higher education is another phenomenon which the sociology of education engages with. The precarious nature of economic forces like privatisation and marketisation has increasingly brought the burden of payment and resources upon the students. This has led to or resulting in unhealthy competition amongst universities who now see students as clients who must be serviced.

The rigorous process of learning, unlearning and relearning is neglected as institutions struggle to cut down on expenditure and increase profit. The result of this neglect most often is a cultural, intellectual and pedagogic debacle which defeats the ultimate purpose of higher education in South Africa, transformation. From a sociological perspective the project of marketisation represents the attempt to commodify academic education. Specifically, it is oriented towards the transformation of what is an abstract, intangible, non-material and relational experience into a visible, quantifiable and instrumentally driven process (Furedi, 2010; Jongbloed,

2003). The next phenomenon is the hidden curriculum which constitutes the hidden norms and values transmitted indirectly in the higher education sector. Whereas the official curriculum is made up of subjects, subject content, formal lessons etc. the hidden curriculum is composed of teacher attitudes and expectations, and the general ethos of school which includes such things as attitudes to punctuality, attendance, dress codes and future career aspirations (Fomunyam, 2014).

Hidden norms and values that drive particular societies, be they positive or negative, are couriered in the curriculum and help shape the society which in turn shapes education and the curriculum. The next idea which the sociology of education focuses on is the ideological state apparatus. To Marx the main function of education in a capitalist society is to transmit an ideological justification of capitalism, presenting the unequal capitalist system as normal and inevitable. The ideological underpinnings of higher education help to model and remodel the society by conspicuously maintaining its place in the higher education sector and making sure that the statuesque is not destroyed (Lowith, 2002). Universities do this indirectly by mirroring the inequality found in wider society (lecturer–student relations, banding and streaming), thus getting students used to the idea that inequality is normal. Material deprivation is another key sociological notion predominant in higher education (Furedi, 2010; Jongbloed, 2003). The lack of basic resources informs school choice, performance and the educational encounters the student ends up with. When students lack basic necessities, like food, internet and proper housing conditions, their ability to study at home or concentrate in the class is hampered, creating a negative effect on their educational achievement (Furedi, 2010; Jongbloed, 2003). The sociology of education therefore concerns itself with the wellbeing of the student and how societal orientations necessitate or hamper their academic performance. These key considerations of sociology and the sociology of education has by and large shaped the educational experience of most students and continue to determine the kind of educational

encounters they have and the kind of citizens they eventually turn out to be.

Furthermore, there are three key theories of sociology which have made a tremendous impact in education in general and higher education in particular. Theories which are now understood as theories of the sociology of education or sociological theories of education are the functionalists perspective, conflict perspective and symbolic interactionist perspective. The functionalist perspective emerged from the work of Herbert Spencer and Emile Durkheim and was further developed by Talcott Parsons and Robert Merton (Mooney, Knox, & Schacht, 2015). Functionalism as a sociological perspective sees the society as a system of interconnected parts that work together in harmony to maintain a state of balance and social equilibrium for the whole. The state or nation relies on this balance of power to function. In this light, education is made to serve several functions in or for the society.

Firstly, it ensures the process of socialisation. Since people or students are to learn the norms, values, and skills they need to function in society within the higher education sector, education becomes the primary vehicle for such learning (Lang & Moleski, 2016). Through socialisation students are expected to learn about the rule of law, democracy, and social justice amongst others. Through socialisation students are also expected to gain knowledge and develop technical skills be it through the hidden curricula or through the overt or planned curricula. The process of socialisation operates in units. For example, ''family provides a context for reproducing, nurturing, and socializing children; education offers a way to transmit a society's skills, knowledge, and culture to its youth; politics provides a means of governing members of society; economics provides for the production, distribution, and consumption of goods and services; and religion provides moral guidance and an outlet for worship of a higher power'' (Mooney et al., 2015, p. 30). Ballantine et al. (2017) argue that functionalists use the terms functional and dysfunctional to describe the effects of social

elements on society. Different elements of society can be described as functional if they contribute to social stability, and dysfunctional if they disrupt social stability.

Secondly functionalism ensures social integration. Social integration sees society as interwoven or integrated and this integration is necessitated by buy-in or subscription by everyone in the society to common sets of beliefs and values. Once individuals within the society subscribe to these beliefs and values the process of integration unfolds (Barrett, 2016).

The third function of functionalism is social placement, and this is necessitated by the need for different kinds of people to fill different kinds of positions in the society. Access and orientation to higher education aims at placement students are place into particular programmes to address different society needs or base on their abilities (Mulkay, 2014). The last function of functionalism is social and cultural innovation. Social and cultural innovation is theorised as a direct function of education because scientists cannot make important scientific discoveries, artists and thinkers cannot come up with great works of art, poetry, and prose unless they have first been educated in the wide variety of courses which makes up the higher education curricula. Sociologists have identified two types of functions: manifest and latent. The manifest functions are those that are intended and directly orchestrated so they can be easily recognised. Latent functions on the other hand are consequences that are unintended and often hidden (Weber, 2008). Functionalism as a sociological perspective therefore gears towards maintaining the functioning of the society. It seeks to keep the society in a particular direction by ensuring reproduction.

The second perspective is the conflict perspective, and this sees the society as made up of different groups and interests competing for power and resources. Society is divided into classes or groups of people who are always competing for power and resources in the nation. The conflict perspective explains various aspects of our social world by looking at which groups have power and benefit from a particular social

arrangement. For example, feminists argue that we live in a patriarchal society — with hierarchical systems controlled by men. Feminists would therefore be demanding "that existing economic, political, and social structures be changed" (Weir & Faulkner, 2004, p. xii). The conflict perspective originated from the works of Karl Marx. Marx argued that all societies go through stages of economic development. The era of development in the world has continuously evolve from agricultural to industrial, and concerns over meeting survival needs are usually replaced by concerns over making a profit, the hallmark of a capitalist system. Industrialisation leads to the development of two classes of people: the bourgeoisie, or the owners of the means of production (e.g., factories, farms, businesses); and the proletariat, or the workers who earn wages (Mooney et al., 2015). The society is usually divided into the bourgeoisie and the proletariat or the 'haves' and the 'have-nots'. The workers, who may earn only subsistence wages, are denied access to the many resources available to the wealthy owners. Greer, Van Bunderen, and Yu (2017) argue that the conflict perspective focused on the causes and consequences of class conflict between the bourgeoisie (the owners of the means of production and the capitalists) and the proletariat (the working class and the poor). They further maintain that the economic, social, and political implications of the rise of capitalism brought about the existence of a powerful minority class (the bourgeoisie) and an oppressed majority class (the proletariat), and created class conflict because the interests of the two were at odds and resources were unjustly distributed among them. Within these two groups the system of unequal social order is maintained through ideological coercion which creates consensus and acceptance of the values, expectations, and conditions as determined by the bourgeoisie. Marx theorized that the work of producing consensus was done in the 'superstructure' of society, which is composed of social institutions, political structures, and culture, and what it produced consensus for was the 'base', the economic relations of production (So, 2014).

Marx reasoned that as the socio-economic conditions worsened for the proletariat, they would develop a class consciousness that revealed their exploitation at the hands of the wealthy capitalist class of bourgeoisie, and then they would revolt, demanding changes to smooth the conflict (Lowith, 2002). But the changes made to appease conflict maintained a capitalist system, and so the cycle of conflict would repeat. But if it created a new system, like socialism, then peace and stability would be achieved. The conflict perspective therefore sees society as always in tension; conflicts arising from the uneven distribution of resources, status, and power amongst the different groups in society become the engine for social change (Lowith, 2002). In this context, power can be understood as control of material resources and accumulated wealth, control of politics and the institutions that make up society, and one's social status relative to others determined not just by class but by race, gender, sexuality, culture, and religion, among other things.

The last perspective, symbolic interactionism, which was largely influenced by the works of sociologists like George Simmel, Charles Cooley, George Herbert Mead and Erving Goffman reflects the micro-sociological perspective of the society and emphasises that human behaviour is influenced by definitions and meanings that are created and maintained through symbolic interaction with others. Rock (2016) argues that symbolic interactionism sees the identity or sense of self for the individual as shaped by social interaction. This means who we are is shaped by others' interpretations of us and how we respond to these interpretations. We develop our self-concept by observing how others interact with us and label us. By seeing a reflection of ourselves in how others see us, we bring alive the "looking-glass self" notion. Symbolic interactionist studies of education examine social interaction in the classroom, on the playground, and in other school venues. This is to provide ample understanding as to what happens on the university campus, and how it is related to the larger society. This perspective sees reality as actively constructed in everyday life. Booher-Jennings (2008) argues

that symbolic interactionism focuses on how people interact and how they make sense of the interaction. In this light, individuals through shared freedom and meanings are able to think and develop their actions and these actions affect the groups they belong to and ultimately the society. People with similar culture and background would tend to interpret situations in a particular way because of their pattern of socialisation. Antikainen (2005) argues that the fundamental concept of symbolic interactionism is that people act on the basis of meanings, and the object of study is how meanings originate in interaction. This means the self is construed as a social product with two facets: the subjective self (I) and the objective self (me), with the former being the creative side of the self and the latter the passive, 'social' side that mirrors others. Symbolic interactionism as a sociological theory of education sees reality as a class of phenomena that exist regardless of our will and which we cannot wish away. This reality is a result of people's creative action in two respects:

> "made by people and constructed from meanings given by people. Thus, the evolution of social order is characterized by the following dialectics: society is a human product, society is an objective reality, and human being/individual is a social product" (Antikainen, 2005, p. 33).

Since symbolic interactionism is about the construction of reality at the micro level, it can therefore be used to explain how socialisation shapes student performance, attitudes, values, self-concept and aspirations, and economic status amongst students.

The three sociological perspectives articulated above provide inside into the world of sociology of education and how society both shapes and is being shaped by education. They provide insight on cultural and social capital used in the construction of knowledge and how such capital is created. Both the functionalist and the conflict perspectives are concerned with how broad aspects of society, such as institutions and large social groups, influence the social

world. This level of sociological analysis is called macro sociology: It looks at the big picture of society and suggests how social problems are affected at the institutional level. Symbolic interactionism is concerned with micro sociology, another level of sociological analysis concerned with the social psychological dynamics of individuals interacting in small groups.

3. Re-engineering sociological constellations for higher education

The South African higher education landscape in the advent of decolonisation needs re-engineering from diverse angles to ensure that change is not stereotypical but meaning and productive for all stakeholders. this chapter therefore attempts the re-engineering of the dominant sociological approaches and theories in education by proposing four key approaches. These approaches which are not new in themselves but have emerged from the key theories of sociology of education provide alternative ways to look at the society in which the school functions and how that both impact and is impacted by education. They are not exclusive but rather indicate the beginning of a debate around sociological constellations in South African higher education and what direction it should take. These perspectives are: critical functionalism, functional interactionism, critical interactionism and critical inter-functionalism.

4. Critical Functionalism

Functional sociologists like Emile Durkheim and Talcott Parsons believed there is a social structure that shapes individual behaviour through the process of socialisation (Antikainen, 2005). For this socialisation process to be orderly, it is based on 'value consensus' (people agreeing around a set of shared norms and values) which enable people to co-operate and to work together to achieve shared goals (Barrett, 2016). This ensures that the society has a stable social structure, in which different institutions perform unique

functions that contribute to the maintenance of the whole. Functionalists generally believe institutions perform positive functions (they do good things for the individual and society). However, as has been seen in South Africa, universities and institutions of higher learning are not only forces for good. They are also centres of racism, marginalisation, colonisation, patriarchy, and hegemony amongst others (Fomunyam, 2017). The functionality of the society and how it shapes education needs to be re-examined to theorise a path which would open up the discussion not only on the functionality of the society but on the responsive functionality of the society; the education system inclusive. To Barrett (2016) and Durkheim (1956), society has a reality of its own over and above the individuals who comprise it. Members of society are constrained by social facts, ways of acting, thinking and feeling which are external to the individual and endowed with a power of coercion, by reason of which they control the individual. Since the university constitutions a functional unit within the broader society, these facts, ways of thinking and behaving also permeate into the educational landscape and form or constitution the capital (cultural, social and economic), habitus and field in which knowledge is created. Critical functionalism demands the untangling of such units of functionality in which they function as a whole to create unity in diversity wherein units can be held accountable for what values it permeates and the kind of social actors it broods. Higher education needs therefore to move beyond the notion of functionalism if the decolonisation movement will succeed for without a breakdown it the structure, its permeating influences would ensure the continuity of the system. Critical functionalism refuses to accept all units within the dysfunctional unit of the university as value-bearing units, but rather chooses to critically engage with the university to untangle the whole and create value-bearing units which are responsive and produce the right kind of capital in the process of socialisation for knowledge construction.

Talcott (2013) argued that society should be seen as a system. All facets of the society work together to create a

functional unit. He likens the system to the human body and how it works. He argues that institutions in society are like organs in the body – each performing specific functions which were necessary to the maintenance of the whole. Talcott (2013) argued that parts of society should be understood in terms of what they contribute to the maintenance of the whole. This system is anchored on four principles: adaptation, goal attainment, integration and latency. Adaptation means social systems must cope with their external boundary conditions, such as their resource base, physical environment, territory and so on. With the uneven distribution of wealth and resources in South Africa and the current debates around land redistribution it is clear the units of the society which are supposed to be functional can no longer adapt and have created a dysfunctional system which requires disintegration for reconfiguration to generate a system of unity in diversity which would be responsive functionally (Talcott, 2013). Goal attainment on the other hand require the definition of the goals of societies and social institutions, resolving goal conflicts, prioritizing some over others, determining resource allocations and directing social energies. Political activity organizes and directs the goal attainment of modern social systems. The lack of political will especially in the higher education arena to prioritise what needs to be prioritised (Fomunyam, 2017; Hlatshwayo & Fomunyam, 2018), and the channelling of resources in the right direction or resolving of conflicts (Fomunyam & Rahming, 2017) necessitates critical functionalism which would not only accept the statuesque as it is but would try to disentangle and remould it. Integration for its part speaks to the adaptive efforts required for social institutions within a society to be integrated into a cohesive system. The institutions need to be regulated so that a harmonious society can emerge from their interaction. However, the cohesive nature of the systems breeds a particular kind of social agent akin to the desires of the State and not those of the individual who have the right to be free. Critical functionalism is needed to ensure that even in the face of integration, there is disintegration. Finally, latency deals with the encultured patterns of behaviour required by

the social system and which must be maintained. Peoples' motivation must be established and renewed, and the tensions they experience as they negotiate the social order must be managed. Furthermore, the cultural patterns that accomplish this renewal must themselves be maintained and renewed. Within such parameters, it becomes increasing difficult for the individual to function as a unique or distinct social agent with agency and the willpower to create change in society. Critical functionalism opens the door for new possibilities against the currently dysfunctional functionalism.

5. Functional interactionism

Handberg, Thorne, Midtgaard, Nielsen, and Lomborg (2015), Snow (2001) and Blumer (1986) argue that symbolic interactionism is anchored on three principles; firstly that human beings act toward things on the basis of the meaning that the things have for them; secondly this meaning is derived from the social interaction that one has with one's fellows; and lastly these meanings are handled in and modified through an interpretative process used by the person in dealing with the things they encounter. But these meanings keep evolving as the symbols use to describe them keep changing.

The symbolic interactions perspective considers people as active agents, but quite different from the rational, self-centred, autonomous individual. People are agents and the social world is an active one – with constant adjustment and organisation as essential features of social interaction. The self is created through such interactions, but it is not necessarily a fixed and inflexible self, but one that is constantly adjusting to others. The concern is with how the self develops, how social order is constantly being created, and how larger social forces emerge from these. For the symbolic interactionist, the world is an active one and society is this active social world. The challenge with this in the higher education landscape in South Africa is the inability of some, if not all, of the universities to make real meaning of the change process. The happenings around higher education like the

constant change in policies, the hashtag movements, student protests, and global trends amongst others make it difficult for universities to meaningfully engage with these processes and bring somethings out of such happenings. The fast pace of the symbolic change and the rife nature of the academic environment show that stability is needed within this change process to ensure that universities have enough time to respond to changes (Govinder, Zondo, & Makgoba, 2013; Mattes, 2015; Ratele, 2014; Theron, 2016). With the universities battling with racism, epistemic violence, medium of instruction, funding, and management amongst other things, there is a need for a degree of functional interactionism to create stable units which would be functional and responsive.

Jansen (2003) and Karodia, Soni, and Soni (2016) argue that the South African higher education system is troubled by a host of factors like the alignment of universities with neoliberalism, and the ensuing managerialism. The influences of neoliberalism have predominantly been seen in three ways; the way in which the logic of the market defines the purpose of higher education in economic terms; the redefinition of the university as supermarkets for varieties of public and private goods; and the rise of rampant materialism, even within higher education spaces (Badat, 2009). Also, ranking frenzies and the overproduction of such orderings are now dominating the higher education landscape; its over-proximity within the South African university landscape has given rise to forms of anti-educational and narcissistic forms of academic citizenships across the sector. Jansen (2003) further adds that the declining credibility of academic leadership, declining prominence of teaching, declining volume and quality of our research outputs, the declining quality of the student body, the declining status of the South African professoriate, and the declining voice of criticism within higher education are also amongst the major challenges plaguing the higher education system. Functional interactionism would go beyond symbolic interactionism to counter the tragic confluences and conflagrations emanating from socialising in a context plagued by a multiplicity of tantrums which higher

education stakeholders have been unable to deal with and which has resulted in the calls for decolonisation. Functional interactionism would ensure that the different units within the higher education landscape breeding such cacophonous and epistemic façade as to the direction of higher education and the processes of socialisation that produces the current educational quagmire is addressed and made both functional and responsive. It is time therefore to move beyond symbolic interactionism to a more rigorous functional interactionism which would pave the way for the redefinition of symbols for meaning-making and what it means to socialise in different parts of the society.

6. Critical Interactionism

Rock (2016), Carter and Fuller (2015) and Snow (2001) argue that symbolic interactionism has four orienting principles which fine-tune the socialisation process and by so doing create redundancies and social personas which keep society in a permanent state of disrepair. These principles; interactive determination, symbolisation, emergence and human agency all work towards the establishment and maintenance of the statuesque rather than breeding change. The principle of interactive determination speaks to the understanding of focal objects of analysis — be they self-concepts, identities, roles, organisational practices, or even social movements. But these objects cannot be fully achieved by attending only to qualities presumed to be intrinsic to them. The web of relationships in which they are engulfed in and the interactional contexts they are ensnared in needs to be critically examined to produce the basis for rigorous analysis and not just analysis and directed by societal misdemeanours. Symbolic Interactionism sees relation and meaning-making only in relation to society and how the individuals interact with it, be it physically, visually or imagined. This destroys the self as a subject of meaning in itself and its ability to construct meaning independent of society happenings. Critical interactionism would provide the platform to move away from such perspective to a more individualistic one which sees

the individual meaning-maker first before the society. The critical perspective would bring the much-needed change in interactive determination and create room for interaction and socialisation at the behest of the individual to create the kind of capital required by the individual for meaning- making. The principle of symbolization on its part highlights the processes through which events and conditions, artefacts, people and aggregations, and other features of the ambient environment take on particular meanings, becoming objects of orientation that elicit specifiable feelings and actions. However, Snow (2001) argues that symbolization is a continuously problematic issue for social actors; and they are continuously engaged in the interpretive work of making sense of the social world as they encounter and negotiate it daily.

Critical interactionism would enable the dismantling of such assumptions about symbols of meaning-making and how they function in the society. This is primarily because symbolic interactionism failed to recognise the extent to which symbols and the meanings they convey are often, perhaps routinely, embedded in and reflective of existing cultural and organisational contexts and systems of meaning, which systems themselves need to be understood critically if worthwhile meaning is to be constructed. This redundant reliance on the meanings associated with the symbols rather than seeing them as evolving with age and time constitute part of the reason why higher education has remained colonised. Engaging critical interactionism would engender the meaning-making process as an ongoing one with symbolisation being experienced differently by different actors. The principle of emergence focuses attention on the non-habituated side of social life and its dynamic character and thus the potential for change, not only in the organisation and texture of social life, but also in associated meanings and feelings. However, the non-habituated side of social life is preconditioned by the habituated and if the habituated and its meaning-making processes are faulty, the resultant change being created in the non-habituated preconditioned by the habituated would be faulty. This is why a lot of initiatives in South African

higher education have failed to produce the desired results. Critical interactionism would ensure the emerging change is studied with the parameters of critical consciousness and the habituated social life artefacts.

The last principle, human agency, deals with the active, wilful character of human agents. It recognises that "human beings are neither hard-wired robots responding in a lockstep fashion to internal directives or codes nor as passive social actors behaving merely in accord with extant structural and cultural directives and constraints. Yet biological, structural, and cultural factors are not dismissed in the determination and explanation of behaviour" (Snow, 2001, p. 373). Symbolic interactionism views these factors as predispositions on action without necessarily determining the character of that action. Social agents take into account the structural and cultural constraints that impinge on situations in the course of developing their respective lines of action. Human agency is a factor of meaning making processes developed over time and when such meaning is developed on wrong symbols the agency is corrupted. This explains why education in South Africa has remained colonised despite amazing efforts by the government and the universities themselves. The structures upon which they are building is faulty and this can only be rectified through, or by using, critical interactionism. Critical interactionism would examine the basic principles of interaction by redefining them and making sure that they are based on values and symbols which can built a better society.

7.   Critical Inter-Functionalism

Sociology of education speaks to the social in education and shapes how education gets to shape the society. The three dominant sociological perspectives (critical perspective, symbolic interactionism, and functionalist perspective) in higher education in South Africa offer unique perspectives on understanding reality and social life which inform the processes of meaning making and knowledge construction. But in themselves these perspectives are limited, especially

in a higher education sector like that of South Africa's, plagued by diverse challenges. Critical inter-functionalism offers an alternative vantage point for the understanding of reality. It selects from all three perspectives to build a confluent perspective or network of understanding and ways of understanding society and social life, as well as how society both shapes and is shaped by education. Critical inter-functionalism would seek to understand the society as a whole and its meaning-making perspectives through the symbols it holds dear. From a contextual perspective moving forward critical inter-functionalism would seek to redefine these perspectives and symbols to create a paradigm shift in the meaning-making process and the understanding of the functionality of the society. This would thereby aid in shaping both education and society in ways that it would become responsive at all levels.

Critical inter-functionalism would address the unequal social order especially in education maintained through ideological coercion which creates consensus and acceptance of the values, expectations, and conditions as determined by the bourgeoisie. The unequal nature of the South African society neither requires functionalism to maintain the statuesque or symbolic interactionism to maintain the meaning-making and socialisation process nor the critical perspective alone to critic and trigger change, but critical inter-functionalism to trigger change and ensure that new-meaning making symbols are developmental and functional units, which are developed and maintained to ensure a responsive society. Education and educational systems require some level of stability to function and for these stable systems to produce and ensure apt meaning-making processes, the codes and symbols of knowledge construction need to be validated with local or contextual experiences, to produce new meaning-making patterns which can be maintained.

Critical inter-functionalism as a theory for sociology of education would not only ensure responsiveness both in the education system and in the society but responsiveness in the process of education, and in the learning experiences

garnered by students through the course of their education. The advent of decolonisation has exposed the taken-for-granted exigencies in education and expounded upon the need for critical consciousness and how such consciousness should be used to orient education in South Africa.

8.   Conclusion

The sociology of education is by no means an easy subject in education but one which requires careful interrogation, for it by and large both shapes education and the society as well as the different orientations of education. However, the decolonisation move has created the need and urgency for the destruction of educational hegemony and the emergence of educational pathways which would speak to real life experiences for sociology speaks to social life and the realities in the society. Sociology of education must therefore move beyond technocratic views of society which seeks to maintain the statuesque to one that would create new avenues and opportunities for meaning making in the society. The three key sociological theories have been excellent till date in driving higher education in South African but it is time to explore other perspectives which speak to the moment and the urgency of student needs.

Critical functionalism, functional interactionism, critical interactionism and critical inter-functionalism are alternative pathways which can be considered for sociology of education. They are by no means definitive or exclusory but marks the beginning of conversations in South Africa around the re-engineering of sociology of education and what approaches to use and direction to take as a way of opening up the discourse on sociology of education. The article concludes therefore with two key recommendations; firstly that sociology of education is key in higher education for the society both shapes and is shaped by education and as such the study of sociology of education needs to evolve, as well as its approaches and schema, which are used in meaning construction and socialisation both within the academic milieu and the society

upon graduation. Secondly, educational theories should never be left to remain static or fallow as we strive to improve both the quality of education and the educational experience. The re-engineering or reconstitution of the same to influence local context and the meaning-making process should be the focus of sociology of education. Life itself is not static, neither is the quality of life or social experience. The theory must constantly evolve to meet the change and address the challenges.

References

Antikainen, A. (2005). Classical Sociological Theories and the Modern Sociology of Education. In J. Nyman (Ed.), *Studies in the Sociology of Education and Culture.* Joensuu: Joensuu University Press.

Arum, R., Beattie, I. R., & Ford, K. (2010). *The structure of schooling: Readings in the sociology of education.* London: Sage.

Badat, S. (2009). The role of higher education in society: Valuing higher education. *HERS-SA Academy*, 13-19.

Ballantine, J. H., Hammack, F. M., & Stuber, J. (2017). *The sociology of education: A systematic analysis.* London: Routledge.

Barrett, L. F. (2016). Functionalism cannot save the classical view of emotion. *Social cognitive and affective neuroscience, 12*(1), 34-36.

Bennett, K. P., & LeCompte, M. D. (1990). *How Schools Work: Sociological Analysis of Education.* New York: Longman Publishing

Blakemore, K., & Cooksey, B. (2017). *A sociology of education for Africa* (Vol. 8). London: Routledge.

Blumer, H. (1986). *Symbolic interactionism: Perspective and method.* California: University of California Press.

Booher-Jennings, J. (2008). Learning to label: Socialisation, gender, and the hidden curriculum of high-stakes testing. *British Journal of Sociology of Education, 29*(2), 149-160.

Carter, M. J., & Fuller, C. (2015). Symbolic interactionism. *Sociopedia. isa, 1*, 1-17.

Clark, B. R. (1973). Development of the sociology of higher education. *Sociology of Education, 46*(1), 2-14.

Durkheim, E. (1956). *Education and society.* London: Collier.

Elias, N. (1978). *What Is Sociology?* New York: Columbia University Press.

Fomunyam, K. G. (2014). Curriculum theorizing and individualism: An exploration of the curriculum's relation to the social, personal and political dimensions of schooling. *Mevlana International Journal of Education (MIJE), 4*(2), 122-131.

Fomunyam, K. G. (2017). Decolonising the future in the untransformed present in South African higher education. *Perspectives in Education, 35*(2), 168-180.

Fomunyam, K. G., & Rahming, M. (2017). Knowledge as power for social transformation. *Zoe International Journal of Social Transformation, 1*(1), 1-6.

Furedi, F. (2010). Introduction to the marketisation of higher education and the student as consumer. In M. Molesworth, R. Scullion, & E. Nixon (Eds.), *The marketisation of higher education and the student as consumer* (pp. 1-8). London: Routledge.

Govinder, K. S., Zondo, N. P., & Makgoba, M. W. (2013). A new look at demographic transformation for universities in South Africa. *South African Journal of Science, 109*(11-12), 1-11.

Greer, L. L., Van Bunderen, L., & Yu, S. (2017). The dysfunctions of power in teams: A review and emergent conflict perspective. *Research in Organisational Behavior, 37*, 103-124.

Handberg, C., Thorne, S., Midtgaard, J., Nielsen, C. V., & Lomborg, K. (2015). Revisiting symbolic interactionism as a theoretical framework beyond the grounded theory tradition. *Qualitative health research, 25*(8), 1023-1032.

Hlatshwayo, M. N., & Fomunyam, K. G. (2018). Genopolitics: The dormant niche in political science curriculum in South African universities. *2018, 14*(1), 1-9. Retrieved from https://td-sa.net/index.php/td/article/view/470

Jansen, J. D. (2003). On the state of South African universities: Guest editorial. *South African journal of higher education, 17*(3), 9-12.

Jongbloed, B. (2003). Marketisation in higher education, Clark's triangle and the essential ingredients of markets. *Higher education quarterly, 57*(2), 110-135.

Karodia, A. M., Soni, D., & Soni, P. (2016). Wither Higher Education in the Context of the Fees mustfall Campaign in South Africa *Research Journal of Education, 2*(5), 76-89.

Lang, J., & Moleski, W. (2016). *Functionalism revisited: architectural theory and practice and the behavioral sciences.* London: Routledge.

Lowith, K. (2002). *Max Weber and Karl Marx.* London: Routledge.

Matheson, D. (2014). What is education? In *An introduction to the study of education* (pp. 15-32). London: Routledge.

Maton, K. (2013). *Knowledge and knowers: Towards a realist sociology of education.* London: Routledge.

Mattes, R. (2015). South Africa's emerging black middle class: a harbinger of political change? *Journal of International Development, 27*(5), 665-692.

Mooney, L., Knox, D., & Schacht, C. (2015). *Understanding social problems.* Stamford: Cengage Learning.

Mulkay, M. (2014). *Functionalism.* London: Routledge.

Rao, S. S., & Singh, S. (2018). Max Weber's Contribution to the Sociology of Education: A Critical Appreciation. *Contemporary Education Dialogue, 15*(1), 73-92.

Ratele, K. (2014). Currents against gender transformation of South African men: Relocating marginality to the centre of research and theory of masculinities. *NORMA: International Journal for Masculinity Studies, 9*(1), 30-44.

Rock, P. (2016). *Making of symbolic interactionism*: Springer.

Snow, D. A. (2001). Extending and broadening Blumer's conceptualization of symbolic interactionism. *Symbolic interaction, 24*(3), 367-377.

So, A. Y. (2014). The Making of the Hong Kong Middle Class in the 1997 Transition and Beyond: a Conflict Perspective. In H. Hsin-huang (Ed.), *Chinese Middle Classes: Taiwan, Hong Kong, Macao and China* (pp. 249-260). London: Routledge.

Talcott, P. (2013). *The social system.* London: Routledge.

Theron, L. C. (2016). Toward a culturally and contextually sensitive understanding of resilience: Privileging the voices of black, South African young people. *Journal of Adolescent Research, 31*(6), 635-670.

Weber, M. (2008). *Max Weber's complete writings on academic and political vocations.* New York: Algora publishing.

Weir, S., & Faulkner, C. (2004). *Voices of a new generation: A feminist anthology.* Boston: Pearson College Division.

Wexler, P. (2017). *Social analysis of education: After the new sociology* (Vol. 57). London: Routledge.

Young, M. (2002). *The Curriculum of the Future: from the'new sociology of education'to a critical theory of learning.* London: Routledge.

Part 3

Theorising Online Learning and Technology

Chapter 12

Is Turnitin for Punitive or Educative Measures in Postgraduate Students' Research Experiences?

Lerato Hlengiwe Sokhulu
University of KwaZulu-Natal

Abstract

Higher Education Institutions (HEIs) use digital technologies in various activities including teaching, learning and research practices. Turnitin is one of the digital technologies used by HEIs, such as universities, to detect plagiarism with a similarity index for both academics' and students' work. Over the recent years, HEIs have been challenged with an increasing problem of plagiarism, especially due to the use of online tools for learning and research. As a result, most HEIs have resorted to the use of plagiarism detecting tools such as Turnitin, to compare academic work produced by students against various online sources. This qualitative case study explored postgraduate masters students' experiences of using Turnitin for research purposes at a HEI in South Africa. Six participants were purposively selected from a larger doctoral study, to share their experiences of using Turnitin to detect plagiarism in their masters research projects. Semi-structured interviews and focus group discussions were used to generate data to address the key research questions. Thematic analysis and the Persona-Tech framework were used to analyse and interpret data. The findings of the study indicate that Turnitin was used to detect similarities more to punish students than to educate them. This study recommends that using Turnitin should be personalised according to students' needs, so that it

can produce a personal experience that may detect similarities to educate the students.

1.   Introduction

Higher Education Institutions (HEIs) across the world are faced with a situation where academics and research supervisors deal with large numbers of students through Digitalised Curriculum (DC) forms (Khoza & Mpungose, 2020). As a result, it is tempting for students to reproduce information from a diverse range of published studies, especially during the COVID-19 pandemic-induced online learning that results in plagiarism. Therefore, HEIs have a task of addressing plagiarism from students. One of the commonly used solutions is to have students submit their work through anti-plagiarism software such as Turnitin. Turnitin is a software programme developed by John Barrie in 1997, to identify similarity in information presented by students and academics; and to encourage originality and proper reference of sources used in academic work like assignments, articles, theses and dissertations (Sokhulu, 2021). Likewise, Zuma (2020) observes that Turnitin is a software that was developed to generate a similarity index on academic work produced by various stakeholders in education and research. The Turnitin software compares textual matches in submissions to content in its internet database, and generates a report based on similarity in the work produced (Batane, 2010). In other words, Turnitin establishes whether plagiarism has taken place by producing a content similarity index report which identifies text that matches with information from other online sources. This similarity index report can be used by academics and other relevant stakeholders to determine if a student has plagiarised.

Plagiarism can be defined as the act of presenting someone else's ideas as your own (Mphahlele & McKenna, 2019). Vithal (2009) similarly calls it a form of academic theft, in which a person steals other people's or their own (self-plagiarism) ideas without referencing. The act of

plagiarism needs to be addressed in order to uphold a high academic standard, and protect academic integrity. Software and digital technologies such as Turnitin were introduced to help curb incidents of academic theft. this chapter addresses one of the themes identified in a larger doctoral study on masters students' experiences of using digital technologies in research. The specific purpose of this chapter was to explore postgraduate students' experiences of using Turnitin for their research studies. this chapter aimed to explore postgraduate masters students' use of Turnitin according to socialisation, professionalisation, and personalisation experiences, as determined by their study needs or situations. This study found it essential to explore what these experiences meant in relation to using Turnitin in research within the Fourth Industrial Revolution era (4IR) characterised by digitalised research practices.

2. Literature review and framing of the study

Digitalised educational experiences

The advancement in digital technologies has resulted in multiple revolutions, which have triggered significant changes in economic, societal, and educational systems (Schwab, 2017). We are currently in the 4IR or digital age, where most practices are digitalised because of innovations such as internet of things, cloud computing, artificial intelligence, robotics and many others (Elayyan, 2021). The higher education sector is not spared from such technological innovation, as digital technologies have had a significant effect on teaching, learning and research practices offering various educational digital opportunities to both academics and student communities. Higher Education Institutions have had to design suitable digitalised curriculum matching students' needs during the 4IR and COVID-19 era, in order to attend to different professionalisation, socialisation and personalisation experiences.

Theorising experiences of using Turnitin

Turnitin can be used to support social and professional learning according to students' personal needs (Amory, 2014). In other words, students can use Turnitin for their research studies as informed by their socialisation, professionalisation and personalisation needs (Zuma, 2020; Khoza, 2016). In this study, socialisation refers to using Turnitin as informed by informal activities that may support learning. For example, a case study by Sokhulu (2021) noted that students were able to informally help each other understand the use of digital technologies during COVID-19 lockdown (a socialisation experience). Professionalisation is the use of Turnitin drawing from formal learning experiences, like learning to use Turnitin effectively in research following prescribed rules by the university (policies) and other formal activities (Kiriakidis, 2013).

Personalisation experiences speak to using Turnitin to address individual research needs that may draw from either socialisation or professionalisation processes. This personalisation experience has been found to be an under-researched phenomenon in studies relating to the use of digital technologies for learning and research (Khoza, 2021). This study intends to reveal students' Turnitin personalisation experiences in order to enhance the understanding of how to personalise digital technology use in research. Using semi-structured interviews and reflective activities, Khoza (2015) found that teachers used Turnitin to identify plagiarism from students' work as a punitive measure. The findings indicated that, as a professionalisation practice, Turnitin did not help teachers to fully prevent students from plagiarising (Khoza, 2015). Students could still commit plagiarism despite the application of a plagiarism detecting software such as Turnitin. Similarly, in a study exploring mathematics lecturers' understanding of Turnitin, Zuma (2020) found that lecturers noted that some students could manipulate Turnitin to get a low content similarity index report. These findings imply that, even though Turnitin is designed to help combat plagiarism, students did not always use it in accordance with

the rules, particularly if it was used to punish students who plagiarised. Students have developed mechanisms to continue plagiarising even though the use of Turnitin is implemented to prevent such acts. The findings from these studies also raise concerns about the Turnitin software's usefulness as an aid to resolve plagiarism issues among students.

Effective use of Turnitin in higher education

In a study conducted at the university of Botswana, Batane (2010) reported that Turnitin was effective in decreasing plagiarism when students were made aware of the integration of the software in their studies, and the implications of plagiarising. In a survey study, Graham-Matheson and Starr (2013) found that students acknowledged Turnitin for helping them improve citation, plagiarised less, and excelled in academic writing. In the study by Graham-Matheson and Starr (2013), constant instruction and guidance (from tutors) on how to use the Turnitin software and how to write academically, acknowledging all sources, resulted in a considerable reduction in student plagiarism. Studies, such as those by Ledwith and Rasquez (2008), Özbek (2016), Orlanda-Ventayen (2018), and McCarthy and Rogerson (2009), have found lower levels of plagiarism in students' work following the implementation of Turnitin and the provision of further support from academic staff. This suggests that Turnitin was a useful tool to educate students on academic writing, and to further develop their writing skill in order to avoid plagiarism. It is worth noting that formal support and training were required for Turnitin to be used effectively as part of the professionalisation experience.

Person-Tech analytical framework

The present study argues that using digital technologies such as Turnitin requires the evaluation of experiences according to various factors shaped by socialisation and professionalisation processes. These processes further influence one's personal experience with digital technologies. The Persona-Tech analytical framework is conceptualised

using useful components from the Cultural Historical Activity Theory (CHAT) and Unified Theory of Acceptance and Use of Technology (UTAUT) frameworks. These components are listed as factors shaping the socialisation and professionalisation processes respectively.

The combination of socialisation and professionalisation processes affects users' individual experience with Turnitin, resulting in unique experiences which include willingness and patience for learning, developing problem-solving skills, understanding the purpose of Turnitin, and seeking help and information on effectively using Turnitin in academic studies. Such factors are negotiated by the Persona-Tech analytical framework, which is used in this study to interpret findings (see figure 1).
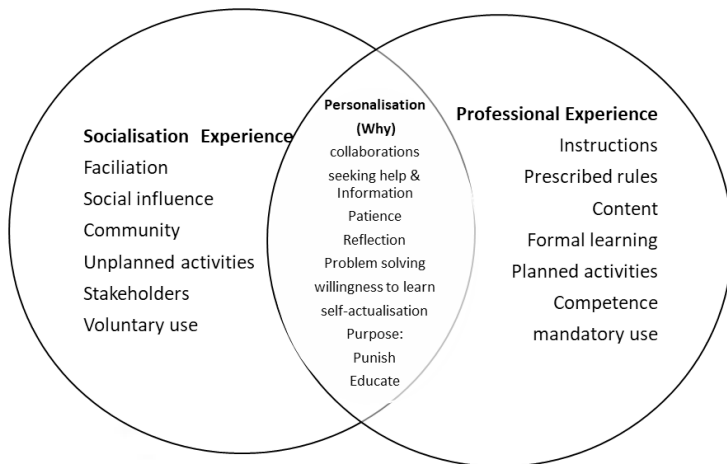

Figure 1: Persona-Tech analytical framework used to understand postgraduate students' experiences with Turnitin. From Sokhulu (2021, p. 441)

According to the Persona-Tech framework, socialisation experiences may include any social influences that inform students' understanding of Turnitin. These influences can come from the students' research community consisting of various stakeholders. These stakeholders facilitate voluntary

and informal learning that may take place regarding the use of Turnitin in research studies. Professionalisation involves formal experiences with Turnitin. These may include planned and formal learning activities relating to the software use, mandatory implementation of Turnitin, following instructions according to prescribed rules (policies) and professional competence for using Turnitin, gained from formal training. Scholars like Graham-Matheson and Starr (2013), Ledwith and Rasquez (2008), and Zheng (2021) attest to providing students with professional support on how to effectively use Turnitin in their academic work. However, this professional support may not cater for the needs of students who prefer to learn how to use Turnitin informally (socialisation experience). Such students may continue to plagiarise because their needs are not met.

The abovementioned studies provide solid findings on students professionalisation experiences with Turnitin, and critically evaluate its effectiveness in the fight against plagiarism. However, they do not take into account students' personalisation factors such as problem-solving skills and patience, socialisation influences, and individual study needs. Moreover, recent studies, such as those by Dlamini (2019), Khoza and Biyela (2020), and Mpungose (2020) have been silent about such personalisation factors. The present study is important because it reflects on both the experiences of socialisation and professionalisation, as informed by students' individual needs related to using Turnitin, thus producing a unique personalisation experience. This personalisation experience further reveals postgraduate students use of Turnitin in punitive or educative ways. This study argues that the personalisation factors promoted by the Persona-Tech analytical framework, which other studies have been silent about, are essential for scrutinising students' experiences with Turnitin.

Many studies exploring the experiences of using Turnitin for academic purposes are conducted using survey and mixed methods with undergraduate students as participants (Bailey, & Challen, 2015; Balbay, & Kilis, 2019; Nova & Utami, 2018;

Mtshali, 2021; Zaza, & McKenzie, 2018). This study is different in that it is qualitative, and samples postgraduate Master of Education (M.Ed.) students to share their personalisation experiences of using Turnitin in research which has been found to be missing in literature. While quantitative research focuses on numerical data and statistical analysis, qualitative research is more concerned with gathering and analysing textual data. This change in the research approach can lead to in-depth insights and conclusions that may not have been revealed through quantitative studies. Furthermore, the transition from undergraduate to postgraduate studies represents a significant change in learning in terms of depth and complexity of the research conducted. The presentation of postgraduate students' realities can lead to further meaningful findings that can inform the use of Turnitin in research. The literature search further revealed that there is a dearth of studies that explore South African postgraduate masters students' experiences with Turnitin, to evaluate its usefulness as a punitive or educative tool in research.

3. Research purpose and questions

The purpose of this study was to explore postgraduate masters students' experiences of using Turnitin in their research studies. The aim was also to understand postgraduate masters students particular ways of experiencing the use of Turnitin.

The study aimed to address the following research questions:

- What are postgraduate students' experiences of using Turnitin in research?
- What informs postgraduate students' particular ways of experiencing the use of Turnitin in research?

4.   Study Methodology

Research paradigm, design and approach

This study made use of the interpretivist paradigm which is concerned with developing an in-depth understanding about people's experiences to create meaning (Alharahsheh, & Pius, 2020; Teddlie & Tashakkori, 1998). This study further employed a qualitative case study methodology because it allowed for the gathering of in-depth data based on the participants' experiences of using Turnitin in research. Moriarty (2011) describes qualitative studies as providing a detailed and in-depth view of participants' world. This approach also allows participants to draw on their own personal experiences in order to provide detailed data. Qualitative methods, according to Creswell and Creswell (2017), allow researchers to 'dig' into participants' experiences to describe, analyse, and explain findings. A researcher can then critique the data to understand and interpret participants' experiences.

Sampling and data generation methods

The initial doctoral study had sampled fourteen masters students to be part of the study. However, only six were purposively selected for this chapter, as their experiences addressed the theme of using Turnitin for punitive or educative ways in research. Data were generated through semi-structured interviews and focus group discussions, which enabled the study to generate rich data on participants' experiences, aligning with the qualitative approach expectations. According to Evans and Lewis (2018) and Wilkinson (1998), semi-structured interviews and focus group discussions are among the most utilised data generation methods in qualitative research, as they allow participants to provide detailed responses about their experiences. Both interview and focus group schedules included open-ended questions that enabled participants to respond freely without limitation, but gave an opportunity for further probing. The study was located in a HEI in the Durban area of KwaZulu-

Natal province. Telephone interviews and Zoom focus group discussions were conducted because participants were not physically accessible due to physical distancing restrictions established to reduce the spread of COVID-19.

Trustworthiness and authenticity

To enhance trustworthiness, the study adhered to four principles, namely credibility, dependability, confirmability and transferability (Morrow, 2005; Shenton, 2004). Each interview and Zoom meeting (focus group discussion) was recorded and later transcribed. The recordings and transcriptions were made available to participants to confirm accuracy (credibility). Direct verbatim quotes were used for analysis, reflecting participants' experiences (dependability). The study was reviewed by two senior academics who were supervisors for the larger doctoral study, to confirm unbiased findings (confirmability). Details of the context, methodology and participants' realities were outlined so that readers may be able to transfer findings (transferability).

Participants' profile

Six masters students, in the School of Education (SoE) at Tempo university (pseudonym), were purposively selected to participate in this study. Turnitin is employed across all disciplines found in SoE of Tempo university. Table 1 below presents participants' profiles, noting their discipline of study and phases in research.

Table 1: Participants' profiles

Name	Discipline	Phase in masters research
Azania	Curriculum Studies	Submitted, waiting for results
Jessie	History Education Studies	Submitted, waiting for results
Rose	Gender Education Studies	Finalising dissertation

Name	Discipline	Phase in masters research
Shawn	Science and Technology Education Studies	Submitted, waiting for results
Thabo	Gender Education Studies	Writing literature review
Akinola	Curriculum Studies	Finalising dissertation

5. Data presentation and analysis

Thematic analysis and the lens of the Persona-Tech analytical framework were used to interpret and discuss the findings. Thematic analysis involves identifying, analysing and reporting research data according to themes that emerge from the findings (Braun & Clarke, 2006; Turunen, Vaismoradi, & Bondas, 2013). In this study, thematic analysis was used to code and present data from semi-structured interviews and focus group discussions. The data were analysed, and three themes emerged from the findings. See figure 2 below:
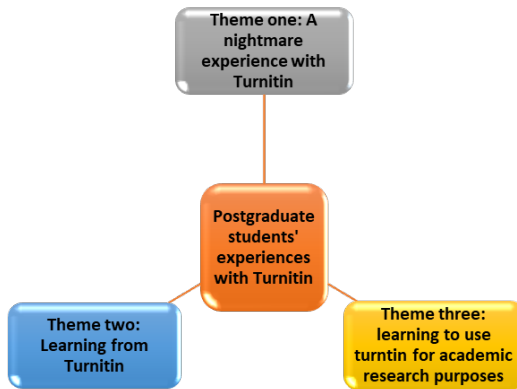

Figure 2: Themes derived from the study findings

Theme one: A nightmare experience with Turnitin

This theme discusses participants' experiences with Turnitin as a mandatory software in research, which turned their experience into a nightmare. Under this theme, students

expressed negative feelings and thoughts about using Turnitin in their research. Their statements suggested that they felt punished by using the software, especially for thesis submission. Furthermore, students felt that Turnitin had some malfunctions with matching commonly used terms in education and research, which further frustrated them.

When asked about her experience with the Turnitin software, Azania expressed the following:

> Oooh Turnitin!! It's a nightmare, an animal that nearly killed me. I put my work on Turnitin when I had to submit the following week and I received 60 something percent [content similarity index]. So, I had to start off everything again. My confusion was that it also highlighted chapter headings as plagiarism too, for example chapter four, the methodology and everything. So, I had to re-do, especially where I did not reference properly. It went down to 9 percent and then I was fine, but the experience nearly gave me a heart attack because I had to spend about four weeks doing that activity of correcting plagiarism. My supervisor said I had to have 10 percent plagiarism in order to have my thesis marked and no one helped me, I had to do everything myself.

Azania had received a high content similarity index report and had to edit her thesis to attain lower similarity. This process was a long and daunting one for her. Azania's experience of turning in her work towards the end of her masters study made it burdensome and time-consuming as she had to refine a fully developed thesis. Depicting her experience with Turnitin as a *"nightmare"* indicates her negative experience with the software. However, she also acknowledged that she did not reference properly in some cases, which earned her a high match on similarity index. The "*nightmare*" experience seemed to have been triggered by the confusion of having to re-work the chapter headings (e.g., the methodology chapter), which come as mandatory headings for a masters thesis outline. From Azania's experience, it was a formal requirement for students to put their work in Turnitin in order for it to be marked.

Another participant (Jessie) also spoke about the nightmare experience with Turnitin. This implied a negative experience with using Turnitin in her research study. In the following extract, Jessie questions the trustworthiness of Turnitin software because of the challenges she faced, particularly with matching terms. Jessie said:

> Whoa!! (Expression) I feel like Turnitin is not reliable because how can it highlight words such as teaching, learning and education because we are all in the same campus or School of Education, so all of us will use such terms. Also, my experience with Turnitin has been bad, especially with my postgraduate masters study because the percentage was still high even though I had paraphrased but it went to 16%. Removing the 6% was a nightmare. I felt like I had done a lot and it should just sit at 10% but it didn't because it kept on highlighting those common concepts such as education, the university and the entire declaration. It feels absurd because it wanted me to change those words, and there is no way I can change teaching and learning because it is going to change the whole meaning of what I am trying to discuss. I ended up being angry and frustrated.

What was particularly intriguing was how many negative thoughts Jessie expressed about her experience with Turnitin. For the second time, employing Turnitin in a research project was described as a nightmare due to the exasperating process of reducing one's plagiarism similarity to meet the ten percent criteria (Azania and Jessie). The participants had to paraphrase and change phrases regularly used in their field of study several times, which Jessie found *absurd.* Jessie's *anger* and *frustration* appeared to have been recreated during this process.

The two participants did not make mention of their supervisors or any other professional stakeholder supporting and educating them on how not to plagiarise in the process. They only referred to their lonely process of reducing similarity index. Sokhulu (2021) and Zuma (2020) claim that when Turnitin is used for professionalisation (formal processes), it becomes a tool for detecting similarities in order to punish students who plagiarise. Such experiences by

Azania and Jessie support the view that Turnitin was used as a formal tool to punish them for plagiarising, because they were overwhelmed with negative emotions that felt like they were being punished. In other words, for Azania and Jessie Turnitin was used as a punitive measure due to the lack of support evidenced in their experience. They ignored the learning process that came with reducing the content similarity report. In addition, they were not educated by anyone on how not to plagiarise. In a study by Ozbek (2016), students with a high Turnitin similarity report were not helped by their teachers to lower it in their assessment (detecting plagiarism to punish). The main descriptors arising from this theme, as a result of a nightmare experience with Turnitin, are summarised in Figure 3.
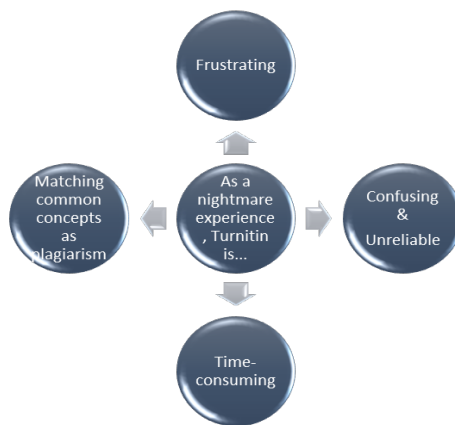

Figure 3: Descriptors derived from participants' negative experience with Turnitin

Theme two: Learning from Turnitin

Two participants (Rose and Shawn) expressed their positive thoughts and educative experience with Turnitin, in their research projects. Rose explained that her experience with the software allowed her to learn and expand her academic writing skills which became an educative experience. She noted that:

> It is fun to use Turnitin because when you write your research and submit it, that makes you gain more knowledge. For example, finding different ways of writing, different ways to define different things, changing the words, it's all fun. I put each chapter on Turnitin and it brings feedback. I then have to do corrections and turn my work in again until it is at zero percent or one percent. Our supervisor doesn't even want ten percent but way less than that.

The response from Rose indicates that she valued the use of Turnitin in her research, as she learnt new ways of writing. This suggests that she could find many ways to paraphrase her work, trying to reduce the similarity contents of her research work. In Rose's case, Turnitin was used as an educative measure to help her improve her academic writing and plagiarise less. The ability to enhance her writing skills informs the educative experience for Rose, making it a fun learning experience to use different words in paraphrasing her work.

It is also interesting to note that participants spoke of different acceptable similarity index reports (in percentages). Azania and Jessie had to produce a ten percent or less index report and Rose was specifically required to have a one or zero percent report by her supervisor. According to Vithal (2009), plagiarism cannot be quantitatively measured, and the percentage in the Turnitin reports only reflects similarity contents. Students are instructed differently on the acceptable percentage to be achieved on the Turnitin report, and have to comply with the requirements of stakeholders considered to be important in their studies, such as supervisors (Alwahaishi & Snásel, 2013). Moreover, when people talk about Turnitin socially, they speak of prescriptions they receive from other people without pointing to a formal documentation that stipulates these requirements (Sokhulu, 2021). In this study, two participants (Rose and Azania) referred to their supervisor's suggestions on which percentage they should obtain on their report.

Shawn's experience shows that employing Turnitin for his study was also an educative measure because he learnt how not to plagiarise through the support he received from a professional staff member who was familiar with the software. Having to reduce the similarity index on Turnitin means that one needs to learn how to reference, cite and paraphrase scholarly findings in an academically acceptable way (Halgamuge, 2017).

Shawn said:

> Aaah Turnitin!!! (laughs) my things had to go through Turnitin. It's compulsory here at school to check the percentage of plagiarism so that I can edit my work if it is high to at least 9%. Turnitin is not difficult because it is done by the supervisor than me. So, I have not experienced any difficulties since I have also learnt how to reduce Turnitin percentage from another guy at the university who was a professional staff.

Similar to Shawn's experience, Thabo also reported having received academic support and assistance, from his supervisor's personal assistant, on how to reduce similarity contents identified by the Turnitin software.

Thabo said:

> I don't even submit for myself on Turnitin. My supervisor has her personal assistant who does it for us and reports back to us what percentage we received and how to go about reducing that. So, even if you have the skills of robbing Turnitin. You just cannot do it because we are not submitting for ourselves. Anyway, now I know how to write using paraphrasing and referencing. I usually do not re-submit after I have worked on the errors.

Zuma (2020) postulate that in instances where Turnitin is used for socialisation, it becomes a tool for educating students. Such educative experiences were evident in both Shawn's and Thabo's cases. Two other implications arise from the above findings. Firstly, the findings imply that there are various stakeholders within the university who help students with

Turnitin related matters. It was a professional staff member for Shawn and a supervisor's personal assistant for Thabo. Secondly, based on Shawn and Thabo's experience, it was apparent that supervisors could submit students' research work on Turnitin on their behalf. However, even though the Turnitin submissions were made by the supervisors, the students were still responsible for the corrections, where there was a high content similarity index report. For Thabo, the guidance provided by the supervisor's assistant was useful to him as he was able to rework minor corrections and had learnt to paraphrase findings. His experience further highlighted Turnitin as an educative measure as he was provided with support and guidance, which led him to understanding the essence of paraphrasing and using Turnitin accordingly (detecting plagiarism to educate).

Interestingly, Thabo appeared to be an opportunistic plagiarist because he thought of manipulating the software to get a similarity index report that reflects a lower percentage. Opportunistic plagiarism refers to the act of consciously and intentionally plagiarising other people's ideas (Ke, 2019; Correa, 2011; Zuma, 2020). Opportunistic plagiarism can result from laziness, unethical behaviour, not considering the importance of citing, and clear intention to cheat (Bailey & Trudy, 2018). It was also interesting to note that Thabo saw nothing wrong with such unethical behaviour as he confidently made mention of it. Nonetheless, having someone else submit on Turnitin for him had his hands tied, with little to no chance of 'robbing' the software for his unethical gain. The main descriptors that emerged as an educative experience with Turnitin are highlighted in Figure 4 below.
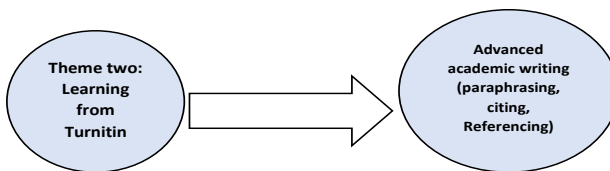

Figure 4: Descriptors that were prominent in theme two

The participants in this theme attested to learning new writing techniques through guided support, which led to an educational experience with Turnitin. It is evident that pertinent academic support and guidance informs educative experiences with Turnitin.

Theme three: Learning to use Turnitin for academic research purposes

Akinola shared an experience of how she learnt to use Turnitin from her friends, peers (socialisation) and past formal experience (professionalisation). She was able to use such knowledge and skills for her current masters study, and further help other students. Akinola said:

> I learnt how to use digital technologies such as Turnitin from my peers and friends, and in turn, I could also help other older students on how to use the software effectively in their studies. My experience with Turnitin in my undergraduate years also helped me use it efficiently for my masters study. My lecturers used to provide us with guidance on how to use the software.

Akinola draws on how she familiarised herself with the Turnitin software. She does not seem to have any complaints or challenges about using Turnitin in her research study. Instead, she speaks about an efficient experience that enabled her to assist others. This suggest that she had a unique personalisation experience of learning how to use Turnitin, drawing from both professionalisation (lecturers) and socialisation (peers). Furthermore, Akinola's acquired expertise with Turnitin allowed her to educate other students about the software through socialisation experiences. Figure 5 below presents descriptors noted in this theme.
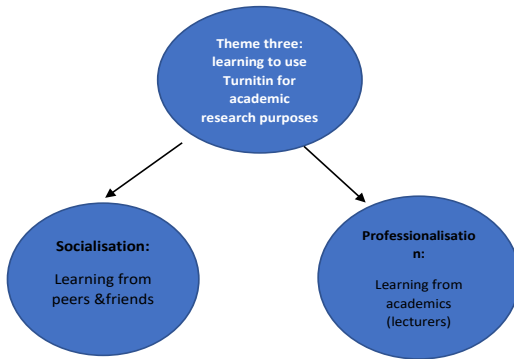
Theme three:
learning to use
Turnitin for
academic
research purposes

Socialisation:

Learning from
peers &friends

Professionalisatio
n:

Learning from
academics
(lecturers)

Figure 5: Descriptors that emerged from theme three

6.   Discussion of findings in relation to the Persona-Tech framework

The above findings show that participants used Turnitin in a variety of ways to attend to their study needs, thus attesting to their unique personalisation experience with the software. The Persona-Tech analytical framework stipulates various personalisation factors that need to be considered when scrutinising students' experiences of using Turnitin in their research studies. Such factors are specified in the personalisation categorisation of the framework (see figure1). According to the Persona-Tech framework, students should seek collaborations to understand how to use Turnitin effectively in their research studies. In other words, students should collaborate with a variety of stakeholders in order to improve their knowledge, writing, and referencing skills, and obtain an academically acceptable Turnitin result. In this study, Shawn and Thabo collaborated with others to reduce similarity contents in their Turnitin reports.

Furthermore, this study suggests (through the persona-Tech) that students should understand how to use Turnitin in research, so that they can use it to improve their studies (producing plagiarism free content) and self-actualise (advance in academic writing). Rose, Thabo, Akinola and Shawn understood the significance of Turnitin in their studies,

and also received the supported they needed, and thus, could use the software effectively as an educative tool to learn how to write academically and not plagiarise. Such experiences informed their educative ways with Turnitin. Additionally, the Persona-Tech proposes that students should have a willingness to learn about Turnitin and academic writing in order to prevent plagiarising. Rose and Thabo mastered the art of paraphrasing as a result of a willingness to learn, and so developed new ways of academic writing. Likewise, their experiences reflect the use of Turnitin as an educative measure to enhance students writing abilities.

Patience is the ability to wait calmly when experiencing difficulty or frustration (Schnitker, 2012). Patience can be a useful coping mechanism in situations where one's experience is not going well. Azania's and Jessie's response about their nightmare experiences with Turnitin needed them to be patient with their lonely process of reducing content similarity index for their theses to be examined. They had to employ the patience factor into their personalisation experience to attend to their study needs (submitting their thesis with an acceptable similarity report).

Moreover, the Persona-Tech negotiates problem-solving as a personalisation factor. Problem- solving involves the process of moving towards a goal when the path is uncertain (Martinez, 1998). When it comes to identifying solutions to a problem, such problem-solving abilities are essential. Azania and Jessie were faced with the challenge of reworking their theses after receiving a high Turnitin content similarity report. These two participants displayed problem-solving skills when they had to find ways to reduce the similarity index reported by Turnitin, without much professional support provided.

Akinola's experience with Turnitin was affected, not only by professionalisation, but also socialisation experiences. In the above literature and findings, students learnt how to use Turnitin in their studies through professional support (Orlanda-Ventayen, 2018; Zheng, 2021). However, Akinola

had a unique experience where she learnt how to use Turnitin effectively, socially (through her peers) and professionally (lecturer's guidance). In order to meet individual learning needs through the Persona-Tech framework, this study encourages using the strengths of both professionalisation and socialisation to aid in successful Turnitin use.

7.   Implications and conclusion

This study explored experiences of using Turnitin as punitive or educative measures for postgraduate master's students. The findings of the study indicated that students experienced the use of Turnitin in varying punitive and educative ways. Some participants felt punished and were frustrated by the process of reducing content similarities on their own. Other participants learnt about using Turnitin effectively in their studies through professionalisation and socialisation processes which enabled them to gain an educational experience with the software. Nonetheless, each participant had their unique personalisation experience with Turnitin, drawing from both or either professionalisation and socialisation experiences, which led to detecting similarities to punish and educate students. This study recommends that Turnitin be personalised according to the research needs of students, thus producing a personalisation experience that may detect similarities to educate the students. The study also recommends that students be made aware of Turnitin's use early in their studies, so that they may work out with their supervisors when and how they will submit their research. Additionally, there is a need to uncover relevant strategies to avoid plagiarism and properly cite academic work. HEIs are encouraged to design Turnitin policies that explicitly define an acceptable similarity level, to establish a standard procedure that is understood by both supervisors and students.

8.   Statements and Declarations

This article was not funded by any organisation and has not been published in any other academic space.

References

Alwahaishi, S., & Snásel, V. (2013). Acceptance and use of information and communications technology: A UTAUT and flow based theoretical model. *Journal of Technology Management & Innovation, 8*(2), 61-73. https://doi.org/10.4067/S0718-27242013000200005

Amory, A. (2014). Tool-mediated authentic learning in an educational technology course: a designed-based innovation. *Interactive Learning Environments, 22*(4), 497-513. https://doi.org/10.1080/10494820.2012.682584

Bailey, C., & Challen, R. (2015). Student perceptions of the value of Turnitin text-matching software as a learning tool. *Practitioner Research in Higher Education, 9*(1), 38-51.

Bailey, M., & Trudy. (2018). On misogynoir: Citation, erasure, and plagiarism. *Feminist Media Studies*, *18*(4), 762-768. https://doi.org/10.1080/14680777.2018.1447395

Balbay, S., & Kilis, S. (2019). Perceived effectiveness of Turnitin® in detecting plagiarism in presentation slides. *Contemporary Educational Technology*, *10*(1), 25-36. https://doi.org/10.30935/cet.512522

Batane, T. (2010). Turning to Turnitin to fight plagiarism among university students. *Journal of Educational Technology & Society, 13*(2), 1-12.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Correa, M. (2011). Academic dishonesty in the second language classroom: Instructors' perspectives. *Modern Journal of Language Teaching Methods*, *1*(1), 65-79.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE publications.

Dlamini, B. B. (2019). *Teachers' approaches to the teaching of geography in Eswatini school.* [PhD Thesis, University of KwaZulu-Natal]. University of KwaZulu-Natal research space. https://ukzn-dspace.ukzn.ac.za/handle/10413/17140

Elayyan, S. (2021). The future of education according to the fourth industrial revolution. *Journal of Educational Technology and Online Learning*, 4(1), 23-30. https://doi.org/10.31681/jetol.737193

Evans, C., & Lewis, J. (2018). *Analysing semi-structured interviews using thematic analysis: exploring voluntary civic participation among adults.* SAGE publications. https://doi.org/10.4135/9781526439284

Graham-Matheson, L., & Starr, S. (2013). Is it cheating—or learning the craft of writing? Using Turnitin to help students avoid plagiarism. *Research in Learning Technology*, *21(1)*, 1-13. https://doi.org/10.3402/rlt.v21i0.17218

Halgamuge, M. N. (2017). The use and analysis of anti-plagiarism software: Turnitin tool for formative assessment and feedback. *Computer Applications in Engineering Education*, 25(6), 895-909. https://doi.org/10.1002/cae.21842

Ke, P. F. (2019, December). *The information disclosure trilemma: Privacy, attribution and dependency.* Proceedings of the 14th Pre-.ICIS Workshop on Information Security and Privacy, Munich, Germany (pp.1-16).

Khoza, S. B. (2015). Can Turnitin come to the rescue: From teachers' reflections? *South African Journal of Education*, *35*(4), 1-9. https://doi.org/10.15700/saje.v35n4a1152

Khoza, S. B. (2016). Can curriculum managers' reflections produce new strategies through Moodlei visions and resources? *South African Journal of Education, 36*(4), 1-9. https://doi.org/10.15700/saje.v36n4a1317

Khoza, S. B., & Biyela, A. T. (2020). Decolonising technological pedagogical content knowledge of first year mathematics students. *Education and Information Technologies*, *25*(4), 2665-2679. https://doi.org/10.1007/s10639-019-10084-4

Khoza, S.B. (2021). Exploring the Migration to a Digitalised Curriculum at UKZN. *Education Sciences*, 11(6), 1-17. https://doi.org/10.3390/educsci11110682

Khoza, S.B., & Mpungose, C.B (2020). Digitalised Curriculum to the rescue of a Higher Education Institution. *African Identities, 18*(4), 1-21. https://doi.org/10.1080/14725843.2020.1815517

Kiriakidis, P. (2013). The effect of a policy of mandatory use of TurnItIn by graduate and postgraduate online students on reducing unoriginal writing. *Postmodern Openings*, *4*(3), 43-61. https://doi.org/10.18662/po/2013.0403.03

Ledwith, A., & Rasquez, A. (2008). Using anti-plagiarism software to promote academic honesty in the context of peer reviewed assignments. *Studies in Higher Education*, 33(4), 371-384. https://doi.org/10.1080/03075070802211562

Martinez, M. E. (1998). What is problem solving? *The Phi Delta Kappan*, 79(8), 605-609. http://www.jstor.org/stable/20439287

McCarthy, G., & Rogerson, A. (2009). Links are not enough: Using originality reports to improve academic standards, compliance and learning outcomes among postgraduate students. *International Journal for Educational Integrity*, 5(2), 47-57. https://doi.org/10.21913/IJEI.v5i2.613

Alharahsheh, H. H., & Pius, A. (2020). A review of key paradigms: Positivism VS interpretivism. *Global Academic Journal of Humanities and Social Sciences*, 2(3), 39-43. http://doi.org/10.36348/gajhss.2020.v02i03.001

Moriarty, J. (2011). *Qualitative methods overview (SSCR Methods Reviews)*. National Institute for Health Research School for Social Care.

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counseling psychology. *Journal of Counseling Psychology, 52*(2), 250-260. https://doi.org/10.1037/0022-0167.52.2.250

Mphahlele, A., & McKenna, S. (2019). The use of Turnitin in the higher education sector: Decoding the myth. *Assessment & Evaluation in Higher Education*, 44(7), 1079-1089. https://doi.org/10.1080/02602938.2019.1573971

Mpungose, C. B. (2020). Is Moodle or WhatsApp the preferred e-learning platform at a South African university? First-year students' experiences. *Education and information technologies*, 25(2), 927-941. https://doi.org/10.1007/s10639-019-10005-5

Mtshali, M. A. (2021). Students' feelings about the online submission of assignments using Turnitin. *Perspectives in Education*, 39(3), 109-120. https://doi.org/10.18820/2519593X/pie.v39.i3.9

Orlanda-Ventayen, C. (2018). Attitude and Practices of Senior High School Students Towards Plagiarism. *Southeast Asian Journal of Science and Technology*, 3(1), 100-104.

Özbek, E. A. (2016). Plagiarism detection services for formative feedback and assessment: Example of Turnitin. *Journal of Educational and Instructional Studies in the World*, 6(3), 64-72.

Schnitker, S. A. (2012). An examination of patience and well-being. *The Journal of Positive Psychology*, 7(4), 263-280. https://doi.org/10.1080/17439760.2012.697185

Schwab, K. (2017). *The Fourth Industrial Revolution*. Currency.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63-75. https://doi.org/10.3233/EFI-2004-22201

Sokhulu, L. H. (2021). Students' experiences of using digital technologies to address their personal research needs during the COVID-19 lockdown. *African Identities*, 19(4), 436-452. https://doi.org/10.1080/14725843.2020.1801384

Teddlie, C., & Tashakkori, A. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. SAGE publications.

Turunen, H., Vaismoradi, M., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences, 1*(15), 398–405. https://doi.org/10.1111/nhs.12048

Vithal, R. (2009). *UKZN Plagiarism Policy and Procedures*. University of KwaZulu-Natal. Retrieved from http://registrar.ukzn.ac.za/Libraries/policies/Plagiarism_Policy_-_CO05041209.sflb.ashx

Wilkinson, S. (1998). Focus groups in health research: Exploring the meanings of health and illness. *Journal of Health Psychology, 3*(3), 329–348. https://doi.org/10.1177/135910539800300304

Zaza, C., & McKenzie, A. (2018). Turnitin® Use at a Canadian University. *Canadian Journal for the Scholarship of Teaching and Learning*, 9(2), 1–15. https://doi.org/10.5206/cjsotl-rcacea.2018.2.4

Zheng, Q. (2021). Chinese University Students' Perceptions of the Use and Effectiveness of Turnitin in EAP Writing. *International Journal of TESOL Studies*, 3(2), 40–55. https://doi.org/10.46451/ijts.2021.06.04

Chapter 13

Virtual Dis-Engagement: Exploring Digital Inequality in African Higher Education Institutions

Vasanthrie Naidoo
Durban University of Technology

Nellie Naranjee
Durban University of Technology

Abstract

The spread of the Coronavirus 2019 (COVID-19) is by far one of the most serious global threats to academics, teaching and learning in African Higher Education Institutions (HEI) in decades. Unsurprisingly, the surge in digitalisation and internet use has played a critical role in salvaging the academic environment. Universities have and are still increasingly shifting courses online at home. Whilst the internet is an important resource in efforts to stay informed and proceed with daily lives during the COVID-19 pandemic, these online approaches to reducing risk are not available to everyone in the same way. It is evident that poorer students who live in less affluent areas pay more for less reliable internet service provision. Although smartphones dominate most socioeconomic groups, they are still a poor alternative for broadband internet access for tasks such as online classes. The digital divide leaves the vulnerable student population who lack access to a reliable broadband internet connection, at a significant disadvantage when it comes to accessing and engaging with forms of knowledge transfer and acquisition.

These educational setbacks can have significant impacts on academic success, research and career opportunities. Rural communities have long been confronted with unique education challenges and chief among them is the digital divide. While millions of African students are grappling with the same challenges, HEIs have scrambled to provide students with resources, but many who live in low-income and rural communities continue to have difficulties. The digital divide is a problem that predates the pandemic, and is a problem that will persist long after it passes. Considering that some form of hybrid learning will likely continue for years to come, the broadband coverage gap is an issue that must be addressed.

Two years of the so called 'new normal' has seen HEIs embed and embrace online and remote learning in its organisational life and service delivery. However, there is still much room for management systems to be explicitly designed, innovated and implemented to reach those students from disadvantaged backgrounds. The situation requires stakeholders to take a fresh look at how the digital divide can be addressed. It requires innovative approaches and creative thinking from a policy and regulatory perspective. This article will therefore review the relationship between information and communication technologies (ICT) and digital inequality in online education in African Higher Education Institutions that impacts on teaching and learning.

1.   Introduction

The global Coronavirus 2019 (COVID-19) catastrophe posed one of the most serious academic, teaching and learning security threats to the African Higher Education Institutions (HEI) in decades. COVID-19 had the potential to severely collapse the educational trajectories of approximately a million higher education students in SA. It was dramatically evident that ready or not, institutions had no alternative but to embark on a drastic intervention such as remote learning. Emergency remote teaching (ERT) was implemented, as a global emergency response and cautionary measure

(Department of Higher Education, 2020). Universities globally and in South Africa had to lock down and offer lectures online, while amendments were made for new ways to continue online education through the National Plan for Higher Education (South Africa. Ministry of Education, 2001). This has seemingly continued, post the COVID-19 lockdown, whereby teaching and learning pedagogies were embraced by a range of technologies, that were offered over learning platforms with various supporting resources and services. Unsurprisingly, this surge in digitalisation and internet use has played a critical role in salvaging the somewhat "reconstructed" academic environment. Despite shifting to online courses at home, some of these changes have not been advantageous for the majority of previously disadvantaged South African students in terms of access to digital technology and digital learning methods.

This chapter provides an overview of how online education has become the new norm post-pandemic and analyses the concepts of digital divide and digital inequality. It further offers perspectives on the main challenges of digital inequality that students in higher education face. Suggestions are provided on how the digital divide in higher education can be bridged and the solutions to ensure sustainability and longevity of these systems, based on the review of the literature.

2. Emerging of Distance Education as a Dominant Issue During the Pandemic

As the post-pandemic world continues to unfold, its long-lasting effects are far from being settled, particularly in an academic or learning environment. Higher Education Institutions have been forced to think differently and contribute innovative responses to the pandemic and one such way has been distance education as an emergency response to salvage the academic year. This saw the rapid switch to online education with useful guidance, advice, training to support educators or lecturers to make the best of this new educational emergency. However, the need remains for critical reflection

and appraisal on the global pivot to review the digitally mediated, remote learning world of the learner.

Bearing in mind that distance education, remote teaching, and online instruction are not new approaches to pedagogy or curriculum design, but in the face of the COVID-19 pandemic have taken on renewed salience. Whilst education became an emergency matter, educational technologies have, along with it, been positioned as a frontline emergency service (Whitley, Beauchamp and Brown, 2021). Yet, despite the uptake of distance education, its concept has become a matter of widespread concern for political affiliations, businesses, charities, teachers, parents and students alike.

The impact of the COVID-19 pandemic has left an indelible mark on a country's education system and one that will take many decades to be washed off. Notably, a digitalised platform of learning and teaching could be viewed as a 'first aid" solution or pandemic crisis management, in order to save the academic year in higher education. Understandably, HEIs were unprepared for the COVID-19 disruption, and good management practices were based on flexibility, strong communication, crisis team creation, digitalisation and remote work. However, while services were greatly impacted, virtual delivery was dependent on the availability of infrastructure.

Although academia may be able to reshape its knowledge and dispositions to function and respond to challenging times with distance learning as a post-pandemic spin-off, a further decline in ethical standards in teaching and learning outputs, can compromise academic integrity and credibility. These concerns therefore raise the following question:

Can academia handle the rigours of distance learning and student engagement through digital technology, without compromising the integrity of learning outcomes?

3.   The 'Sacred Cow' or 'Trojan Horse' of Distance Education

The term 'sacred cow' refers to something that is immune from criticism, often unreasonably so. Here we apply it to the tendency to suspend our critical faculties when the term distance learning or e-learning is used. A Trojan horse on the other hand is a subversive device placed within enemy ranks, referring to the hollow wooden horse in which Greeks hid to gain entrance to Troy so that they could open the gates to their army. We apply this analogy to distance learning or e-learning in three ways. First, like the Trojan horse, distance learning has been welcomed into the academic city post-COVID-19 pandemic, to ensure and manage an engaged learning community.

Computing technology have been embraced by academics more readily. In doing so they may have prevented the whole concept of distance learning from being a subversive experience. Using distance teaching with all the available technology to its best effect calls for some fundamental rethinking of pedagogy (Kringos et al., 2020). In a learning institution, the challenge of fundamentally rethinking a paradigm would attract a large teaching team, but academics appear to work in silos and mostly approach the use of a digital learning platform as lone rangers. Thousands of teachers and educators, acting separately are less likely to develop a new pedagogy than a more concerted approach to solve the problem of having a disengaged class during online teaching.

Online teaching methodologies appear to be having less effect than it might in an area that welcomes opposition and disruption. Historically, educational media, made possible the revolution of distance learning, which was known to increase access, improved quality and provide cost effectiveness (Kringos et al., 2020). First world countries sing the praises of having harnessed distance education as a tool for extending access and offering a richer experience to existing students via online mediums. However, a more subtle but important point

to note is that the Trojan horse of distance education does carry with it a problematic stowaway.

4.   Digital Education: The 'Sacred Cow' of Traditional Education is Slain

Distributive justice is a cause for concern especially in an unequal country such as South Africa, where there is evidence of unequal access to technologies used in online learning as well as unequal access to data and connectivity. Bearing in mind that access to technology does not automatically guarantee a successful pass rate, but it does play a crucial role in student knowledge acquisition that can impact on student throughput rates.

Undoubtedly, a digital platform of teaching and learning, if utilised wisely and in accordance with equitable resources, accessibility and availability, can eradicate all the challenges that come with securing funding for teaching and learning resources at our African universities. Understandably, the pandemic made emergency remote teaching an arduous task for institutions to implement, especially for those who remained grounded as on-campus, contact teachers. However, the changes that have emanated from the so-called short-term plans have now escalated to the "new normal" world of higher education institutions post-pandemic. So much so that contingency plans have had to be instituted to cater for students with access to online resources and those without access had to be developed. It is a fact that online learning is particularly challenging in Africa, where the student population is largely made up of those from impoverished areas. National leaders and governmental structures need to come together in robust discussions with the aim of embracing the new future of African higher education. The new future is a highly digitalised platform of teaching and learning that is consistent with virtual engagement and one that is inclusive of every student and irrespective of colour, caste or creed (Rashid and Yadav, 2020).

5.   Remote Learning and Digital Autonomy

The 21st century has seen a rapidly evolving technological landscape in African HEIs and this has meant that university lecturers have been forced to adapt their teaching approaches without a clear roadmap for attending to the various needs and disparities amongst students. This has resulted in connectivity issues whereby conceptualisation of learning through a digital lens has become somewhat misfocused. Research to this effect has alluded to learning as the process of being unable to cross boundaries by creating valuable digital connections through the setting up of an interconnected network and modified pedagogies. Other sources note that distance learning can draw much from the available internet but continues to face challenges. In other words, for effective e-learning to occur from a distance, accessibility and availability is vital so that students may make connections amongst themselves and the lecturers, irrespective of hindrances faced. Naidoo et al. (2020) have stated that the digital divide amongst students in African HEIs is a hindrance to students as they are unable to realise the full potential of e-learning and distance education. They further add that lecturers still want students to submit assessment tasks and engage with course activities on the learning management systems. Suffice to say, with universities using face-to-face learning becoming vulnerable to the COVID-19 pandemic and other challenges which result in a shutdown of universities, viable alternatives need to be sought to allow students, particularly disadvantaged students, to utilise online learning platforms.

6.   Digital Access

Whilst all young people in South Africa should have the ability to access and skills to use technology effectively and safely to achieve their own goals, whether educational and otherwise, it is extremely hard to get such structures and systems right for the student in higher education (Hussin, 2018). It therefore becomes apparent that there are some common questions that structures and systems in higher education

must address to ensure that virtual engagement and quality of higher education in African universities is enhanced. They are as follows:

1. What are the current challenges to digital access for students in higher education?
2. How can the digital divide be bridged in higher education?

7. Current challenges to digital access for students in higher education

As reported in a study by Naidoo et al. (2020), HEIs closed due to the pandemic, to curb its spread. Many lecturers and educators look to digital means to connect to their students. Whilst distance education remote learning saw a surge during the lockdown period, post-pandemic realities have allowed policy-makers to recognise that some young people are excluded from much of their education and their social networks due to the digital divide and other social injustices that border on inequality and a disadvantaged background.

Digital divide

Al Gore, former Vice President of the United States, used for the first time the expression 'digital divide' on the 29th of May 1996, to indicate the existing gap between the 'Information Haves' and the 'Have Nots', in relation to the K-12 educational programme in the United States (Kouame , 2012:31). The digital divide is the gap that exists between those who have access to the internet and reliable devices and those who do not. Soomro et al. (2020) refer to the digital divide as the disparity between people who have adequate access to Information and Communication Technology (ICT) and those who have none or poor access to ICT. Chang, Wong, and Park (2014) confirm that the digital divide is a complex and multidimensional problem and is the divide or gap between the population; the ones that have adequate access to ICT, and the others that have 'zero' or poor access to computers, the internet, and other digital devices.

Resta and Laferrière (2015) believe that the individuals who are excluded from internet access belong to the weakest sections of the population; in particular these people are subjected to severe social disparities, especially regarding both access to and the use of technologies. Since the early stages of the digital society, this inequality originated in a broad discrimination of human rights in the internet environment. This is the reason why the digital divide has a dual nature, which can be defined as both socio-economic and cultural. The authors posit that not only does digital exclusion lead to a knowledge divide, but it also narrows the openings for intercultural networks, communications, and understandings. Considering the negative effects of the digital divide on the economically disadvantaged and other marginalised groups, Rogers (2016) describes this as social injustice. Centeio (2017) confirms that inequalities exist in educational settings, while the digital gap persists despite rapid developments in technology. The issue is present across the globe and continues to be an area of social concern (Resta and Laferrière, 2015).

Jandric (2020) finds that the digital divide is a problem that affects people from all walks of life. It is a multifaceted issue, but two main characteristics define this gap: access to high-speed internet and access to reliable devices. Many of the individuals who struggle from the digital divide face both. In some areas, internet access is either limited, unavailable, or unaffordable for those who could be equipped. Even with a reliable internet connection, access to certain digital spaces can remain a challenge, always just out of reach for those who cannot afford costly tools like laptops and software. This leaves countless students and professionals to rely on public computers or their mobile devices as their only tools to exist in an increasingly digital world. It leaves many more, like those in rural areas or living under the poverty line, without even that.

Karar (2019) states that the digital divide is a multifaceted phenomenon which comprises social, political, and economic dimensions that influence any society. The social dimension of the digital divide indicates the income gap as an obvious determining factor affecting those who have

access to ICTs and those who do not. Finally, the global digital divide refers to the unequal distribution and access to ICT between the developed and developing societies. More gaps have been identified in the context of divergent digital access such as the education gap, ethnic and racial divisions.

Digital Divide in Africa

COVID-19 has shown the importance of connectivity. It has never been as important to share correct information and combat fake news, while being able to elicit information from citizens (and internet-users) on behaviour and movement. Van Der Merwe (2020) states that Africa is not nearly connected enough. It is still the continent with the lowest internet penetration rate at 39% of the population, compared to a global average of nearly 60%. There are large differences in internet access between rural and urban areas, with smartphone usage in urban areas exceeding that in rural areas by almost 200 per cent in some countries.

Suuk and Simon (2022) found that despite recent growth in internet connectivity, Africa lags behind other regions of the world. The World Bank hopes to help the continent achieve universal connectivity by 2030, but huge hurdles stand in the way. Over the past decade, African leaders working with various local and international partners have made great strides in making the internet accessible for the continent's 1.4 billion people. But, with just 22% internet connectivity, the continent remains significantly behind other world regions. Information Technology (IT) experts have long argued that data costs are too high for most people. In addition, lack of digital skills and literacy remains a stumbling block for many, particularly those living in rural areas.

In a report by the World Bank (2019), it is noted that across Africa, less than a third of the population has access to broadband connectivity, achieving universal, affordable, and good quality internet access by 2030 will require an investment of US $100 billion. This is according to a report launched at the Annual Meetings of the World Bank Group, which calls for

urgent action to close the internet access gap while providing a roadmap to reach this ambitious goal. According to the report, nearly 80% of all required investments are directly related to the need to roll out and maintain broadband networks. However, connecting the unconnected is about more than just infrastructure: about 20% of required investments consists in building the user skills and local content foundations, and another 2 to 4% should be allocated to setting up the appropriate regulatory framework, the report notes. While the private sector has driven most successful broadband initiatives, public agencies play a crucial role by implementing effective sector regulation, addressing potential market failures, and creating the conditions for an open, competitive broadband sector.

Oluwule (2022) reports that for fixed broadband speeds, Ghana is ranked 79th globally, and number one and the fastest in in Africa, with a speed of 53.28 Mbps. Ghana is followed by South Africa, which is placed 85th in the world. Egypt is ranked third in Africa. The cause of Africa's internet deficiency is, predictably, cost. Africa has the most expensive internet in the world. According to the Alliance for Affordable Internet, Africans pay on average 8, 8% of their monthly income to purchase 1GB of data, compared to 3,6% in Latin America and 1,5% in Asia. In some cases, like Chad, the Democratic Republic of Congo and Central African Republic, 1GB was found to cost as much as one-fifth of individuals' earnings. South Africa has the highest data cost among Africa's five largest economies (Oluwule, 2022).

Oluwule (2022) finds that costs are high because service providers are largely unregulated, and infrastructure is poor. In South Africa, a small number of companies control 70 per cent of the wireless broadband market, which has led to distortions in market prices. Market concentration in telecoms, which is a notable feature across the continent, is therefore largely responsible for the connectivity woes. The second reason relates to the first: because of poor or limited infrastructure for connectivity, there are large economies of

scale for providers, which makes it more attractive to form monopolies or oligopolies.

Africa is the second largest continent in terms of its population, which was estimated to be 1.2 billion in 2016 (United Nations, 2017). Most of the 50 plus countries in sub-Saharan Africa are categorised as low income or lower-middle income (The World Bank, 2019). African countries in general are ranked low on most social, health, and economic indicators. Sub-Saharan Africa is of importance in this report because it is the most marginalised and excluded region of the world. The continent of Africa is the one that is most affected by poverty and many other global challenges.

Van Deursen and van Dijk (2019) find that the gap between those who have and do not have access to computers and the internet seems to be a significant factor in limiting the feasibility of e-learning in a South African context. Their study shows that issues such as socio-economic factors, race, social class, gender, age, geographical area and educational background determine the level of the digital divide in a university context. While access to the internet and computers is high in developed European and American universities, African universities—particularly in the South African context—are still battling because of the intensity of the factors which led to the digital divide (Van Deursen and van Dijk, 2019).

Rodrigues et al. (2019) report that research shows that various programmes and policies have been developed and implemented to remedy this challenge; hence, universities provide students with free laptops and Wi-Fi (wireless network commonly allows technological devices to interface with internet) access inside the university and residences. However, little research has been done in the South African context to intervene in addressing university students' challenges (the digital divide) that hinder them from accessing e-learning from home. The authors contend that e-learning while students are at home, can never be realised in a South African university context unless the digital divide is addressed.

Van Deursen and van Dijk (2019) concur and assert that the digital divide remains the major issue and is one of the big limitations to the use of educational technology globally. These authors further argue that the digital divide is a real phenomenon that is here to stay in developed countries but is worse in developing ones. This suggests that although universities can provide free access to Wi-Fi within their perimeters and students' residences, including free laptops, there will be some students (residing in rental rooms or at home) who might not have access to the internet.

A report by the United Childrens Fund [UNICEF] (2020), on internet access among children and young people aged 25 years or younger shows that globally, around 2.2 billion, or two thirds of children and young people worldwide, do not have internet access at home, with considerable disparities observed by socioeconomic backgrounds. While globally, roughly 60 per cent of children and young people from the richest quintile of their countries have internet access at home, less than 20 per cent of their peers from the poorest wealth quintile do. Similar inequalities also exist in places of residence. Over 40 per cent of children and young people living in urban areas are connected at home, compared to 25 per cent of their peers living in rural areas. Still more concerning, a further disaggregation by a country's income level reveals that in low-income countries, internet access at home is nearly nonexistent for children and young people in rural areas or from the bottom wealth quintile.

Karar (2019) citing Van Dijk and Hacker (2003), indicates that the barriers to ICT access are the following:

- Lack of mental access which signifies the inadequacy of basic digital knowledge;
- Lack of material access which refers to the lack of physical access to ICT tools such as computers and the internet;
- Lack of skill access which indicates a shortage in the skills needed to deal with ICTs; and
- Lack of usage access that refers to meaningful usage opportunities.

While the answers seem obvious: e.g. the provision of laptops and / or internet access to those who do not have it, one has to be mindful that access to such services and devices is not a straightforward approach; it is multifaceted and fraught with red tape.

A study by Mpungose (2019) found most students not to have laptops, even though these were provided free of charge by the university. The same author reported that many of these devices issued to students had been apparently sold for personal benefit. They preferred to use mobile phones with free network data bandwidth for communicating amongst themselves. In other words, the use of modern physical resources provides an easy way to ensure e-learning, because it provides access to recorded lectures and electronic resources like videos, but it needs good planning. The main concern that hindered students from realising the full potential of e-learning was the expensive cost of internet infrastructure such as Wi-Fi routers, laptops, mobile phones and access to data bandwidth. Van Deursen and van Dijk (2019) argue that internet access and technological resources are the main limiting factors in universities in developing countries like South Africa, even though students do have skills to benefit from e-learning. In other words, the use of any available physical resources is not a problem to students in a digital age as the problem is the affordability and availability of those physical resources for e-learning.

8.   Bridging the Digital Divide

The worldwide progress in digital education has been exciting to watch, with new advances being made seemingly each week. Even in a post COVID-19 pandemic era, the reliance on digital learning solutions has undoubtedly increased (Tamm, 2021). This raises the question as to how well South Africa will be able to address the ever-growing need for digital education solutions post-COVID, in the context of an already struggling education system.

Mpungose (2020) concluded in his study that the digital divide is a critical issue in the higher education landscape, and is not just technological, but also social, economic, cultural and political. This suggests that in alleviating the digital divide, universities, communities, churches, political figures, businesses and others must collaborate and come up with both practical and theoretical solutions in order to enhance effective e-learning post pandemic.

According to a report by Creamer Media (2017), South Africans, already marginalised in terms of education opportunities, risk being left further behind and even excluded from key aspects of the learning experience. For disadvantaged groups, many still living in areas where educational facilities are rudimentary, access to internet-based learning can provide them with access to high-quality educational resources at a cost significantly less than attending the institutions with associated costs of boarding and transport in addition to the fees. By ensuring more equitable access to the internet, government can support broader access to education across all socio-economic and race groups and geographic locations. In the last decade, the ICT sector has innovated and developed, though not at a fast enough pace to respond to shifting student needs (Creamer Media, 2017).

The Organisation for Economic Co-operation and Development [OECD] (2020) reports that regardless of obvious issues, it is evident that digital learning is expected to continue to be implemented widely. Globally, digital learning was already becoming a more prominent mode of education before the pandemic hit; and has merely been accelerated by the onset of COVID-19. Presently, the digital learning industry is experiencing a growth of 19% or more per year, and it is expected to exceed a value of \$243bn by 2022 (Tamm, 2021). It is therefore evident that there is no escaping Africa's and South Africa's need to adapt to learning digitally. While Africa's digital environment may seem discouraging in terms of education and its restricted resources, there are ways for key issues to be addressed, and solutions need to be crafted collaboratively by various stakeholders. Government,

digital service providers and the education sector need to cooperate to identify solutions that work for individual contexts. Collaborative solutions are required such as increased access to mobile learning, sponsoring the provision of hardware, and providing open access to online educational resources and digital literacy training, among other potential learning programmes.

Mlaba (2021) states that 7.5 million low-income South Africans are paying 80 times more than middle- and upper-income citizens for access to the internet, exacerbating inequality in the country. South Africa's digital divide can be broken down into three factors: access to hardware, understanding digital means of communication, and internet affordability. These factors are having a negative impact on two of the country's best chances at development and equality, those being access to education and access to employment opportunities.

Strategies to bridge the digital divide

The development of accessible, sustainable and impactful free internet access models must be a joint effort. The government controls policy decisions and infrastructure and must have the political will to create a conducive environment for public-private partnerships to thrive. In the private sector, telecoms providers showed a capacity to place student needs at the forefront when they temporarily provided free internet access to university websites during the FeesMustFall protests. More sustained action can be encouraged through attractive government incentives for investment in the ICT-related facets of the education sector. Academic and research institutions must also be equal partners through ongoing consultation regarding their vision for ICT integration and the evolving needs of their students. Finally, civil society must also be engaged, as they represent the communities these programmes aim to connect. The success of these partnerships is what will ultimately enable the output of talented graduates who can contribute positively to the country's workforce (Creamer Media, 2017).

Provision of digital resources

In an article published in the Mail and Guardian (1 March 2021), the Motsepe Foundation (2021) reported that universities aimed for universal digital access for students, and largely succeeded; however, for students in remote areas, device access, electricity, water, conducive work spaces and high data costs were a significant constraint to access their courses, support and learning resources. Some universities provided data for all students, identified digitally excluded students and provided devices. The University of Fort Hare, for example, purchased 6 800 laptops worth R40-million for students who did not have their own. Universities are dependent on universal affordable broadband access—a national priority that still eludes us. Device access, digital literacy, infrastructure and systems are now an absolute necessity for education (Motsepe Foundation, 2021).

Mpungose (2020) supports the view that students should be provided with relevant traditional resources (books, manuals, chats, posts and others) and modern resources (laptops, mobile phones/ tablets, mobile Wi-Fi routers and others). In addition, free monthly Wi-Fi data bandwidth should be provided to students so that they may access e-learning, since this seems to be the main challenge to achieving e-learning in the South African context.

Almaiah, Al-Khasawneh and Althunibat (2020) propose that the university administration and technical support need to offer the necessary technical resources needed to conduct a constant technical maintenance for e-learning system, because sufficient access to e-learning materials without any technical problem or delay will be significantly associated with increasing the adoption of e-learning system successfully. Second, the university administration needs to provide the necessary hardware, software and internet connection, because if the universities are continuously update the necessary technological resources, then instructors and students would be able to implement the e-learning effectively.

Digital literacy training and empowerment

Gomez (2018) finds that even though individuals can access the internet, many are disillusioned by barriers to entry such as a lack of adequate infrastructure and lack of knowledge. These are two major obstacles that create the digital divide. These barriers limit individuals' capabilities in what they can do and what they can achieve in accessing technology. Increased investment is required in staff upskilling, training, equipment and infrastructure. Larger universities may be able to afford these costs, but smaller ones may struggle. With less money to fund studies as a result of the economic disruption of COVID-19, many young people post-pandemic are contemplating studying part-time. With the campus-based university model at risk as a result of the pandemic crippling after effect, universities are increasingly looking into partnerships with the private sector to expand enrolment through hybrid online degrees that allow students to work and study simultaneously with some campus contact.

As the gap between structured education, practical skills and work becomes smaller, the Motsepe Foundation as cited in the Mail and Guardian (2021) notes new forms of financing for education through the private sector. The residential universities have had a sustained experiment in remote learning thrust upon them by COVID-19. Some had already piloted blended models but COVID-19 forced all to consider radically expanding the scope and pace of this process. What the new university model might look like is uncertain, and many variants thereof are likely. Even when the digital access barrier to devices, data, connectivity, digital skills and digital literacy is overcome, the question of the best institutional and learning models, in the face of adversity, still needs to be answered. Traditionally, status quo and self-interest are unreliable guides in crisis intervention and South Africa would be wise to offer its universities the support and flexibility to attempt new and diverse approaches.

Vassilakopoulo and Hustad (2021) find that proper training and education can help mitigate digital inequalities.

Information campaigns also have a significant role to play, and digital divides may be narrowed if vendors engage in trust-building campaigns (Fox and Connolly, 2018). Integrating digital education into curricula can also contribute to reducing digital inequalities and education campaigns can stimulate the adoption and usage of ICTs bridging rural-urban digital gaps (Reinartz et al., 2018). Rural communities typically lag behind in digital skills, and digital literacy training programmes can improve digital engagement in rural communities. Digital literacy programmes targeting higher education students can help them develop the necessary skills and abilities to use digital mobile devices so that they could be part of the digital society (Fox and Connolly, 2018).

Ofusori (2020) finds that digital training and education are the key determinants of digital inclusion. With COVID-19 pandemic, technology is not a luxury but a prerequisite that facilitates active participation in the digital economy. Hence, it is important that all staff and students of higher education institutions are well-trained in the use of technology. ICT training should be at no cost to the staff and students and carried out frequently. Furthermore, the government can make ICT training multilingual in order to accommodate those people from disadvantaged backgrounds who may have limited understanding of the English language. This will enable better understanding as different languages spoken in South Africa will be used in the delivery of the training. This is because only technologically skilled and competent staff and students will be able to confidently perform effectively especially during the COVID-19 pandemic.

Development of internet infrastructure

Desrosiers (2020) states that there is little we can do immediately to address the internet structural inequalities in the middle of the COVID-19 crisis. But eventually one must reflect on divides, digital and other, that are woven into the very functioning of our higher education, to address this discrimination and close the digital divide. The internet depends on infrastructure to transmit information and the lack

of proper internet infrastructure, which is the case in many third world countries, means either poor internet connection or no internet connections.

The Development Bank of Southern Africa (DBSA) (2022) reports that investing in necessary infrastructure in this sector will ultimately provide an economic boost for South Africa. Digital infrastructure refers to services that make use of technology capabilities. This includes internet backbones such as fixed broadband, mobile telecommunications and communication satellites. When money is invested towards project development for digital infrastructure, it means that the networks mentioned above will be built. If the infrastructure is made affordable and accessible to the country's largest population, it introduces them to opportunities they were not privy to before. The development impact increases their access to information, networking opportunities, job opportunities and resources, as well as financial and social inclusion. This, in turn, activates the regional and national economic activity.

Ochao et al. (2022) concluded from their study on mobile internet adoption in West Africa that increasing mobile broadband adoption in Sub-Saharan Africa can have substantial direct and spillover effects, particularly among the most vulnerable socioeconomic groups. Expanding and improving the availability of affordable digital infrastructure, particularly in rural areas, and policies geared toward the universal coverage of 3G mobile services are key to mitigating the risk of a widening digital divide.

Increasing affordability of the internet

One of the chief internet adoption barriers in both developed and developing countries in the world is affordability. A large group of people cannot access the internet because of the high costs involved.

Reddick et al. (2020) found in their study that broadband access in the home is a necessity, especially since the COVID-19 pandemic. Increasingly, connectivity is of vital

importance for school, work, family, and friends. Their paper explored the digital divide in a case study in the United States; in San Antonio which is a majority-minority city where over half of the people are Hispanic. The paper focused on the five key affordability factors that drive broadband adoption. The authors found evidence that four of the factors (geographical disparities, profit-based discrimination, technology deployment cost, and socio-economic factors) played a role in the digital divide in this case study. The results of this study demonstrated that the digital divide is not exclusively a rural/urban digital divide but can also occur in an intra-city context. This is especially evident in low-income areas within the city because they have substantially lower broadband adoption rates. The results of this study demonstrate the importance of looking closely at issues of social exclusion of marginalised groups and the affordability of broadband access intra-city.

Ochoa et al. (2022) add that mobile broadband coverage must be complemented by measures to ease critical barriers, notably those related to affordability, as well as those faced by sociodemographic groups being left behind. To promote digital adoption and, in parallel, to expand coverage, it is crucial to ease the budget constraints on households and foster competition in the ICT industry to converge to competitive pricing in services and assets. It should also be a policy priority to address other potential hurdles to the adoption of mobile internet, such as those related to digital literacy, access to electricity, and the barriers faced by women and farmers, which could hamper the adoption of digital technologies, particularly in poorer, rural areas.

Policymaking to close the digital gap

Policymaking is considered instrumental for closing the digital gap and a mix of policy measures has been suggested in prior research. Policy initiatives can include subsidies targeting specific digitally disadvantaged segments such as a rural population. For instance, governments can apply strong intervention policies to provide equitable ICT access also in rural areas (Park et al., 2015). Burtch and Chan (2019) note

that digital divides may be addressed by crafting policies to equip underprivileged groups with better communication skills, enabling meaningful engagement with digital platforms . Government policymakers can collaborate with schools and universities to support students from low-income households through the provision of home computers aiming to reduce the effect of socio-economic inequalities among students.

9.   Conclusion

During COVID-19, South African universities were compelled to find new initiatives to adapt, putting unprecedented strain on students and lecturers across the country (Mpungose , 2020). These initiatives have affected not only aspects of multimodal teaching and learning approaches, but social transformation in South Africa and around the world. Whilst recognising the diverse student population one has to be cognisant that online learning is not only growing into an accepted mode of teaching, with its arms wide open in embracing 4IR, but will require continuous adaptation, resource allocation, bridging of the digital divide and monitoring to ensure the programme's rigor and integrity. The pandemic impact and post-pandemic impact has exposed multiple levels of inequalities that in higher education include differential treatment of students based on their background such as closed access to knowledge and research results, unevenness in global patterns of research collaboration and lack of access to the basic requirements of digitalised higher education such as devices, internet access, and electricity. The urgency of addressing these inequities must be kept at the forefront as higher education begins to think ahead to create a more equitable post-pandemic world. Our article highlighted that to overcome the digital divide, there needs to be a concerted effort to address the barriers that prevent students from accessing and using technology. Governments, civil society organisations, and private companies must work together to promote digital inclusion and reduce the digital gap. Digital inclusion can be promoted by including policies and programmes that provide affordable

and accessible technology, digital literacy training and initiatives that address cultural and socio-economic barriers.

References

Almaiah, M.A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. *Education and Information Technologies, 25*, 5261–5280. https://doi.org/10.1007/s10639-020-10219-y

Burtch, G., & Chan, J. (2019). Investigating the relationship between medical crowdfunding and personal bankruptcy in the United States: Evidence of a digital divide. *MIS Quarterly*, *43*(1), 237–262. https://doi.org/10.25300/MISQ/2019/14569

Centeio, E. E. (2017). The have and have nots: An ever-present digital divide. *Journal of Physical Education, Recreation & Dance*, *88*(6),11–12. https://doi.org/10.1080/07303084.2017.1331643

Chang, Y., Wong, S. F., & Park, M. C. (2014). A three-tier ICT access model for intention to participate online a comparison of developed and developing countries. *Information Development*, *32*, 226-242. https://doi.org/10.1177/0266666914529294

Creamer Media. (2017, August 15). *The digital divide in South Africa's higher education sector: why public internet access is important in the context of tertiary education.*Retrieved from https://www.polity.org.za/article/the-digital-divide-in-South-africas-higher-education-sector-why-public-internet-access-is-important-in-the-context-of-tertiary-education-2017-08-15/

Department of Higher Education & Training. (2020, March 17). *Measures to deal with the Coronavirus COVID-19 in the post-school education and training sector.* Retrieved from https://www.gov.za/speeches/minister-highereducation-science-and-innovation-statement-measures-deal-covid-19-threat/

Desrosiers, M. E. (2020, March 25). *As universities move classes online, let's not forget the digital divide, Policy Options Politiques.* Retrieved from https://policyoptions.irpp.org/ magazines/march-2020/as-universities-move-classes-online-lets-not-forget-the-digital-divide/

Development Bank of Southern Africa (DBSA). (2022*). How investing in digital infrastructure can boost the South-African economy.* Retrieved from https://www.dbsa.org/article/ how-investing-digital-infrastructure-can-boost-South-african-economy/

Dwolatzky, B. & Harris, M. (2020, July 2). SA Education: A national reset is needed and mass internet access is the only way forward. *Daily Maverick .* Retrieved from https://www-dailymaverick-co-za.cdn.ampproject.org/c/s/www.dailymaverick.co.za/article/2020-07-02-sa-education-a-national-reset-is-needed-and-mass-internet-access-is-the-only-way-forward/amp/

Fox, G., & Connolly, R. (2018). Mobile health technology adoption across generations: Narrowing the digital divide. *Information Systems Journal*, *28*(6), 995–1019. https://doi.org/10.1111/isj.12179

Gomez, D.C. (2018). Digital inequalities among young people in Spain. *Interações Sociedade e as Novas Modernidades*, *10* (312) , 1-18.

Hussin, A. A. (2018). Education 4.0 made simple: Ideas for teaching. *International Journal of Education and Literacy Studies*, *6*, 92-98. https://doi.org/10.7575/aiac.ijels.v.6n.3p.92

Jandric, P. (2020). Teaching in the age of Covid-19. *Postdigital Science and Education*, 2,106 –1230. https://doi.org/10.1007/s42438-020-00169-6

Karar, H. (2019). Algorithmic capitalism and the digital divide in Sub-Saharan Africa. *Journal of Developing Societies, 35* (4), 514–537. https://doi.org/10.1177/0169796X19890758

Kouame, B. J. (2012). *Improving education with emerging technologies*. Cote. D 'Ivoire : Trafford Publishers .

Kringos, D., Carinci, F., Barbazza, E., Bos, V., Gilmore, K., GroenE, O., Gulácsi, L., Ivankovic, D., Jansen, T. & Johnsen, S. (2020). Managing COVID-19 within and across health systems: Why we need performance intelligence to coordinate a global response. *Health Research Policy and Systems, 18*, 1–8. https://doi.org/10.1186/s12961-020-00593-x

Mlaba , K. (2021). How is South Africa's digital divide making inequality worse in the country? Retrieved from https://www.globalcitizen.org/en/content/South-africa-digital-divide-makes-inequality-worse/ 20country/

Motsepe Foundation. (2021, March 1). Some universities provided data for all students, identified digitally excluded. What South Africa's universities have learnt about the future from Covid-19? *Mail and Guardian.* Retrieved from https://mg.co.za/education/2021-03-01-what-South-africas-universities-have-learnt-about-the-future-from-covid-19/

Mpungose, C. (2019). Is moodle a platform to decolonise the university curriculum? Lecturers' reflections. *Africa Educational Review, 17*(1), 100–115. https://doi.org/10.1080/18146627.2018.1479645

Mpungose, C.B. (2020). Emergent transition from face-to-face to online learning in a South African University in the context of the Coronavirus pandemic. *Humanities and Social Sciences Communications, 7*(113),1-9. https://doi.org/10.1057/s41599-020-00603-x

Naidoo, V., Ghuman, S., Naranjee, N., Madamshetty, L., Adam, J.K., Sibiya, M.N., & Naidu Krishna, S.B. (2020). Preparedness of staff and students in utilising learning management systems in health sciences as crisis intervention during lockdown. Learner and subject at the dawn of digital research-led teaching and learning in the time of COVID-19. *Alternation African Scholarship Book Series*, 4, 127-143.

Ochoa, R.G., Lach, S., Masaki, T., & Castelán, C.R. (2022). Mobile internet adoption in West Africa. *Technology in Society, 68*, 1-12. https://doi.org/10.1016/j.techsoc.2021.101845

Organisation for Economic Co-operation & Development (OECD). (2020), *Keeping the Internet up and running in times of crisis.* Paris, OECD Publishing.

Ofusori. L. (2020, September 28). *COVID-19 deepens digital inequalities in South Africa, How can this be addressed*? Retrieved from https://ddp.org.za/blog/2020/09/28/covid-19-deepens-digital-inequalities-in-South-africa-how-can-this-be-addressed/

Oluwule, V. (2022, February 9). *Top 10 African countries with the fastest fixed broadband.* Retrieved from https://africa.businessinsider.com/local/markets/top-10-african-countries-with-the-fastest-fixed-broadband/n4mrdkz/

Park, S., Freeman, J., Middleton, C., Allen, M., Eckermann, R., & Everson, R. (2015). The multi-layers of digital exclusion in rural Australia. *48th Hawaii International Conference on System Sciences (HICSS 2015) Proceedings,* IEEE, 3631–3640. Los Alamitos, California, IEEE Computer Society. https://doi.org/10.1109/HICSS.2015.436

Rashid, S., & Yadav, S. S. (2020). Impact of Covid-19 pandemic on higher education and research. *Indian Journal of Human Development, 14*, 340-343. https://doi.org/10.1177/0973703020946700

Reddick, C. G., Enriquez, R., Harris, R. J., & Sharma, B. (2020). Determinants of broadband access and affordability, An analysis of a community survey on the digital divide. *Cities (London, England)*, *106*,1-14. https://doi.org/10.1016/j. cities.2020.102904

Reinartz, A., Buhtz, K., Graf-Vlachy, L., & König, A. (2018, March 23). *Mechanisms of engagement with, and disengagement from internet applications, A qualitative study of online job search*. Paper presented at the 39th International Conference on Information Systems, San Francisco. https://doi.org/10.2139/ssrn.3345148

Reisdorf, B. C., & Rikard, R. V. (2018). Digital rehabilitation, A model of reentry into the digital age. *American Behavioral Scientist, 62* (9), 1273–1290. https://doi. org/10.1177/0002764218773817

Resta, P., & Laferrière, T. (2015). Digital equity and intercultural education. *Education and Information Technologies*, *20*(4), 743– 756. https://doi.org/10.1007/s10639-015-9419-z

Rodrigues, H., Almeida, F., Figueiredo, V., & Lopes, S.L. (2019). Tracking e-learning through published papers: A systematic review. *Computer Education*, *136*,87–98. https://doi.org/10.1016/j.compedu.2019.03.007

Rogers, S. E. (2016). Bridging the 21st century digital divide. *TechTrends*, *60*(3),197–199. https://doi.org/10.1007/ s11528-016-0057-0

Soomro, K.A., Kale, U., Curtis, R., Akcaoglu, C.& Bernstein, M. (2020). Digital divide among higher education faculty. *International Journal of Educational Technology in Higher Education*, *1*,17-21. https://doi.org/10.1186/s41239-020-00191-5

South Africa. Ministry of Education. (2001). *National Plan for Higher Education*. Pretoria Government Printers .

Suuk, M., & Simon, W.W. (2021, November 5). *Can Africa achieve universal internet access by 2030?* Retrieved from https://www.dw.com/en/can-africa-achieve-universal-internet-access-by-2030/a-59729090/

Tamm, S. (2022, January 7). *100 essential e-learning statistics for 2022.* Retrieved from https://www. student.org/e-learning-statistics/

The World Bank. (2019, October 17). *Achieving broadband access for all in Africa comes with a $100 billion price tag.* Retrieved from https://www.worldbank.org/en/news/press-release/2019/10/17/achieving-broadband-access-for-all-in-africa-comes-with-a-100-billion-price-tag/

United Nations. (2017, July 17). *Sustainable development goals indicators.* Retrieved from https://unstats.un.org/sdgs/indicators/indicators-list/.

United Nations Children's Fund [UNICEF]. (2020, May). *Remote learning and digital connectivity.* Retrieved from https://data.unicef.org/topic/education/remote-learning-and-digital-connectivity/

Van Der Merwe, E. (2020, July). Connectivity now: Why internet access in Africa is more vital than ever. *Young African Magazine*, Retrieved from https://www.mandelarhodes.org/ideas/connectivity-now-why-internet-access-in-africa-more-vital-than-ever/

Van Deursen, A.J.,& van Dijk, J.A. (2019) .The first-level digital divide shifts from inequalities in physical access to inequalities in material access. *New Media and Society*, 21(2),354–375. https://doi.org/10.1177/1461444818797082

Van Dijk, J., & Hacker, K. (2003). The digital divide as a complex and dynamic phenomenon. *The Information Society*, 19(4), 315–326. https://doi.org/10.1080/01972240309487

Vassilakopoulou, P., & Hustad, E. (2021). Bridging digital divides: A literature review and research agenda for information systems research. *Information Systems Frontiers, A Journal of Research and Innovation, 1*, 1-15.

Whitley, J., Beauchamp M, H., & Brown C. (2021). The impact of COVID-19 on the learning and achievement of vulnerable Canadian children and youth. *Facets, 6*,1693–1713. https://doi.org/10.1139/facets-2021-0096

Chapter 14

Demystifying the Mainstream: Moving from Theories to Stories

Adewumi Kehinde Christopher
Durban University of Technology

Abstract

Africa, as we have it today, is a direct implication of the researches of the past. Likewise, the future of Africa depends on the quality and relevance of current researches and innovations in education and society. However, in recent years, researchers such as Clegg (2012), Hammond (2018) and Wood, Phan and Wright (2018) have problematized the contemporary relevance and usage of theories in researches. Oftentimes, the impact and understandability of an idea are sacrificed at the altar of theorizing. In such cases, theories and structures are given more attention than the potential impact and contribution of the researcher's idea. Are theories truly problematic? How do we reconcile the place of theory in contemporary researches and education? How can theorizing be rid of its abstractive tendencies? How can theorizing be decolonized? What are the alternatives to the mainstream approach to theorizing? All these are the questions this chapter seeks to raise and attempt to answer. The argument in this chapter shall be based on Chimamanda Ngozi Adichie's ideas on storytelling and Sir Ken Robinson's ideas on seeking creativity as an alternative to rigid adherence to a standardized curriculum.

1.   Introduction

This chapter is not against theories. It is important to point out that theories are the lenses through which researchers view different phenomena. Much of the work done in higher education is dependent on theories (Rasmussen, 2017). With theories, complex issues in the world are better understood (Goodson, 2010). Theories help researchers sort information in order of relevance to the overall aim of academic exercises. Theories help in making sense of observed patterns. Social theories, for instance, offer fresh perspectives and explanations in the understanding of social structures and observed social occurrences. Through feminist theory structures and notions of inequality and injustices along the lines of gender are better recognised and perhaps comprehended. Theories enable critical thinking and the in-depth analysis of social norms or abnormalities (Rasmussen, 2017). The application of theoretical perspectives to phenomena provokes the need to re-think and question established structures. From simple theories such as common-sense or conspiracy theories to more complex scientific theories, most theoretical explanations seek to create meaning and make sense of reality (Goodson, 2010).

While the importance of theories to the explanation and comprehension of phenomena is apparent, how then does one define and use theory? Theory as an entity has always evaded different scholars' attempts at a simplified, one-dimensional definition and summation (Hoffman, 2003). This has resulted in a proliferation of definitions (Denzin, 1986; Cohen, 1989; Moore, 1991; Coleman, 1994; Goodson, 2010; Turner, 2013; Craib, 2015; Lemert, 2017; Collins & Stockton, 2018), often specific to disciplines and contexts. For instance, film theory seeks to identify and solve problems within the domain of cinema (Bordwell & Carroll, 1996). The multifaceted dimensions of theory, which are both the implication and evidence of its intricate complexity (Hoffman, 2003), have constantly impacted students' recognition and proper usage of theories in their writings. The different proliferation of theories, especially in the social sciences, offer little

understanding and consensus on what determines a strong or weak theory or even what a theory is (Sutton & Staw, 1995). Consequently, theory becomes a familiar term, yet obscure and dreaded.

The misguided tendencies of theories are nicely captured in the opening statement of Rasmussen's (2017) seminal chapter on the *Role of Theory in Research.* She writes: "Theory is a word that is evocative. It evokes confusion, frustration, trepidation, discomfort, shame, joy, disorientation, invention, and derision. At times researchers will likely experience all of the above in regard to theory" (p. 53). Having painted such a troubling picture with which most researchers are familiar, she then explains that the confusion is part of the 'joyful' process of applying theories to a problem. Like Rasmussen, Hoffman (2003) also thinks theory is 'beautiful' and its beauty lies in its complexity.

From a different perspective, Hammond (2018) admits that theories and their understanding and use can be confusing. Such confusion became even more troubling for Hammond when he received a reviewer's comment on an article saying, "an interesting paper but not sufficiently theoretical" (para. 1). A student was also quoted by Kiley (2015) as saying "people kept asking me about my theoretical perspective but I didn't have a clue what they were talking about" (p. 57). The abstract nature of theories and theorists' explanations of their ideas often presents higher education students with the wrong idea about academic writing. Theorists such as Foucault have been accused of such abstractive tendencies in their explanations (Silvestri, 2022). In a discussion with Shatz (2020), Michael Wood talked about an encounter he once had with a student to illustrate some academics' love for obscurity and abstraction when dealing with theories:

> "I had a student at Columbia...a very clever guy who was a movie editor and worked on the *Exorcist.* He was writing an M.A. thesis about Joseph Conrad and he wrote about eighty or ninety pages full of about every jargon he could find. I read it then I said to him 'do you understand this?' and he said, 'no, I don't, but I thought you had to write

like that.' I suggested he should write so that he and I can understand, then we can take it from there." (5:48).

In the hysterical laughter that accompanied Shatz's (2020) final advice to the student, the ridiculousness of the obscurity and abstractness displayed in most mainstream theoretical accounts was particularly illustrated. In a sense, some students' inability to properly account for the theoretical bases of their works can be a result of laziness in terms of critical thinking and in-depth analysis. That being said, another way to look at the matter would be to assume that some theories, in themselves, are unnecessary, overused, or distracting altogether.

In their article, *Against Theory*, Knapp and Michaels (1982) challenged the place of theory in clarifying authorial intentions from the beliefs based on texts. In their opinion, theory is rather useless in such an exercise because both the author's intentions and the texts are one and the same. Thereafter, Knapp and Michaels (1982) proposed, rather boldly, that if they were right in their argument on the uselessness of theory in literary criticism and discourse, "then the whole enterprise of critical theory is misguided and should be abandoned" (p. 724). While judging whether their argument is valid is not the aim of this chapter, it offers an interesting grist for my argument here. This chapter seeks to answer a few questions: Are theories truly problematic? If they are, how do we then reconcile the place of theory in contemporary research and higher education? I shall answer these questions, especially the latter, by proposing an alignment with the tenets of Post-Theory.

Before I make this proposal, it is important to attempt to proffer an answer to the first question. The answer is quite simple: Yes, theories are problematic, at least I think so. The major problem of theory is its abstractive tendencies (O'Connor, 1969), which sometimes are further complicated, over-ciphered, and drastically stylised by some theorists' or academics' displays of linguistic dexterity. The second problem identified in this chapter is theory's tendency to

exclude certain realities in its accounts in order to maintain the neatness of its postulations. These shall be discussed further in the chapter.

Further in the case against theory, in their article *What Theory is Not*, Sutton and Staw (1995) identify a few problems with theory. They argue that "lack of consensus on exactly what theory is may explain why it is so difficult to develop strong theory in the behavioural science" (p. 372). This, perhaps, is why reviewers and editors react differently and hold different beliefs about the same iteration of theory. Another problem with theory in the authors' account is the contradictions in the process of building theory further problematise the use and comprehension of theory. Even the use of the word 'theory' is excessive and diverse, thereby perpetrating obscurity rather than fostering understanding (Merton, 1967). Nonetheless, it is worthy of note that the problematic nature of theory has prompted scholars to activate a process of re-thinking and re-assessment of the place of theory in higher education to discern whether it truly helps or distracts (Knapp & Michaels, 1982).

Such a process of re-thinking, for instance, accompanied the collaboration between the fields of humanities and medicine. The need for more humane medical practices meant that practitioners sought an alternative to strict adherence to pure biomedical theoretical frameworks. The unilateral focus on technology and biomedicine dehumanised the practice of medicine. As Bates (2014) puts it, "the patient was understood only in terms of cells, germs, and snapshots of body parts. This type of medical knowledge apparently dehumanised doctors who increasingly saw patients as objects rather than subjects" (p. 9). The alignment with the humanities—the arts, social sciences, and behavioural sciences—provided a solution to such scientific objectification of patients.

2. Post-Theory: A Very Short Introduction

I find the Oxford University Press's *Very Short Introduction* series useful here as I do not intend to offer all that there is

to know about Post-Theory. My plunge into Post-Theory here is a means to an end—the end being to postulate that stories that illuminate the human exceptions to neatly packaged theoretical explanations should be given a chance in theoretical constructions.

To the disappointment of many young researchers in higher education, post-theory is not necessarily the end of the reign of theory, which "boomed" in the 1960s (Hunter, 2006, p. 79). It, however, illuminates and often advocates for the transformational modifications happening to the mainstream theories. Post-Theory itself is a theory—for to argue against the mainstream theory is to put forward an alternative idea, in other words another theory. This reminds me of Tredell's (1984) notion that "You can appear to invalidate a case against theory by arguing that such a case is itself theoretically based" (p. 28) Post-theory is a response to the perceived inadequacies of mainstream theories to communicate and capture the mind of thinkers and the realities of changing times (Tredell, 1984). So, in a way, different disciplines (and by extension, their theorists) have their particular opinions and propositions on the ideas to embrace as a progression from mainstream theory.

In film studies, like many similar thinkers, Carroll (1996) agrees with the notion that theory in its original form has outlived its usefulness. "For even if theory is dead", he says, "one wonders whether theorising about film has a future" (p. 38). Carroll (1996) writes that film studies have "squandered what may turn out to have been a once-in-a-lifetime opportunity by effectively stifling debate between theory and alternative paradigms" (p. 68) As a proposal for the Post-Mainstream Film Theory, Carroll prescribes a dialectical consciousness in film studies as the only way forward from the imminent demise of film theory. The focus and considerations of film theorists should not be single-edged but double-edged or multi-edged if you like.

"Film theorising...should be piecemeal. But it should also be diversified. Insofar as theorists approach film from many different angles, from different levels of abstraction

and generality, they will have to avail themselves of multidisciplinary frameworks. Some questions about film may send the researcher toward economics, while others require a look into perceptual psychology. In other instances, sociology, political science, anthropology... Film theorising should be interdisciplinary. It should be pursued without the expectation of discovering a unified theory, cinematic or otherwise. That is, it should be catholic about the methodological frameworks it explores." (Carroll, 1996, p. 40).

Similarly, despite Spinney's (2022) scepticism about the move from mainstream scientific theories towards post-theory, in her article titled *Are We Witnessing the Dawn of Post-theory Science?* she recognises the gradual change happening to scientific theories. An example of such is Isaac Newton's law of gravity by the arrival of machine learning tools that "predict your preferences better than any psychologist" (para. 2). As a result, the classic scientific method of hypothesising, predicting and testing, is being challenged and relegated to the backstage.

With so much clarity, Tredell (1984) announces literature's exodus into the age of post-theory in his article titled *Post-Theory*:

> "...it seems to me that the triumph of theory is illusory; that the expansion of theory is on the point of bringing about its downfall. The proliferation of theoretical options and the increasingly obvious weakness of their claims to knowledge is leading to the crisis, not in literary studies, but in theory. This may be temporarily disguised by the institutionalisation of theory in the academy, but as far as literature is concerned, we are entering an age of post-theory." (p. 28).

One would expect that since Tredell made this announcement in 1984 mainstream theoretical discourses in literature would have been rid of their perceived rigidity and one-dimensionality by now. But this is not the case. We must now take a decisive step to embrace and explore the alternative paradigms Carroll suggested. In the age after theory,

unconventional and under-represented forms of data in theoretical discourses, which Muthukrishna and Henrich (2019) categorise in their abstract as "personal intuitions and culturally biased folk theories" (p. 1), should be given a fair chance.

Art, emotions, self-expression, cultural beliefs and distinctive experiences should be given a chance. To totally disarm and defang the abstractive tendencies of theories, personal (or unusual) stories, which sometimes are the exceptions to carefully explained theories, should be given a chance as a form of post-theory. To clearly argue and proffer an explanation of how South African women are affected by the generalised notion of sexuality, for instance, the account of the young girl who was raised by a single mother in the suburbs of Limpopo should not be ignored. When such distinctive voices are given a chance in theoretical explanations, then theory stands a chance of being rid of its strangeness, exclusivity, and abstraction.

When we speak of contemporary art, we refer mainly to a Western construct, but there is also contemporary art in Africa. The term 'contemporary African art' then refers to the practice of contemporary art in Africa. Contrary to different opinions about identity politics and the underlying intention of othering the art and artists from and in Africa, I believe that the term contemporary African art or African art is major an essential identity marker. The moment we say 'contemporary art' without such an identity marker, then Africa is forgotten from the equation. This is simply because contemporary art originated from the West. This is also the case with theory. The formal construction and application of theory are also of Western emanation (Bordwell & Carroll, 1996; Hunter, 2006). For us to properly account for the presence of theory in the context of African higher education and research, we may need to give due attention to the African peculiarities which are often embedded in our stories. To further reinforce this stance, I suspect that what constitutes the nitty-gritty of feminist discourse in France will be different from that in South Africa or any part of Africa.

Let me add here that what I am proposing is simply a focus on stories and their intrinsicality. Usually, when mention is made of stories, one or two of the few thoughts that come to mind are: 'Isn't that simply narrative inquiry?' or 'are we not just referring to phenomenology?' I honestly think there are no simple answers to these questions. While stories and people's lived experiences are common to both narrative inquiry and phenomenology (Clandinin & Caine, 2008; Randles, 2012; Kim, 2015; Van Manen, 2017; Ford, 2020), attaching such theoretical labels to the appreciation of stories is risking a retrogression back to the abstractive and structural crises that accompany mainstream theory. That way, we give the power back to theory and not the truth. My worry is that as academic researchers, we sometimes filter these stories through the tiny holes created in our theories. In the process, some parts of the subject's experiences are judged useless as they cannot fit into our prearranged theoretical moulds. The question is: to what end do we engage in research? To unravel the truth; for social impact; for theoretical affirmations; or for PhD degrees?

It is necessary, at this point, to turn to Chimamanda Ngozi Adichie's (2021) ideas on storytelling as an alternative to the idolatry of theory. Before that, it is important to note that although my proposition here is mainly couched in the arts and humanities, it also carries with it some interdisciplinary consequences.

3.   Storytelling as Reinforcement of Theory

In February 2022, six months after the Taliban took over power in Afghanistan, VICE News published a documentary by Yeung (2022) on its YouTube channel. The documentary explores the state of women's rights in Taliban-ruled Afghanistan. Despite the obvious fact that women are rarely seen in public, and the billboards carrying women's images have been blacked out, the Taliban government[1] seems determined to put forward and defend the idea that women are happy, women are safe,

---

1   You can also refer to it as 'the Taliban men' as the government is constituted by men alone.

and their rights are secure under the Taliban. When Iftikhar Samilluh, the Taliban judge in Wardak Province was asked about the nature of cases women bring to his court, his answer reads (as cited in Yeung, 2022):

> "Women's issues don't come up too often because there are no problems. Women's rights are protected...Two days ago we received a case. It was an issue between a husband and wife. When we listened, there was no real issue between them. I solved the problem and she left. Now, she is living a peaceful life." (7:28).

Two separate accounts of two women, representing several other cases of women's abuse in Taliban-ruled Afghanistan, challenge the Taliban's claim that women are happy and living peacefully with their rights properly protected. The first case was referenced by Judge Iftikhar above. The woman's brother, Bismillah[2], who had been jailed so as to coerce his family to accept the ruling of the Taliban court over his sister's case, told a different story to Yeung (2022). His sister Miriam[3] and her husband Abdullah[4] have been married for several years. They have seven children together but Abdullah has been violent. He beats her till she is hospitalised with several broken bones. Abdullah married another woman and kicked Miriam out of their home.

At the time, the Afghan government was still in power. She went to court seeking a divorce in Kabul. Several witnesses corroborated her story and the judge ruled that the couple be separated. But Abdullah did not want the separation, so he fled to the Wardak Province where he could not be forced to sign the divorce papers. He joined the Taliban, and then filed a complaint against his wife. Miriam was summoned and Judge Iftikhar presided over the case. The judge, not believing her story, ordered that the Taliban takes Miriam back to her husband's house where the violent abuse continued. This time, Miriam's skull was broken. In the words of Judge Iftikhar

---

2   A pseudonym
3   A pseudonym
4   A pseudonym

"the accuser demanded a divorce because she was beaten. There weren't any witnesses of the beatings ... He took an oath saying that he didn't beat her and that was the end of the case" (20:32). The oath of Abdullah was upheld by the court against the testimony of Miriam which was corroborated by X-rays of her broken bones.

Twenty-two-year-old Fatimah[5] is another victim of violence and abuse in Afghanistan. Fatimah, who is from an area where the Taliban had been in control for over ten years now, hides in a shelter for women who have been victims of abuse and violence. As she has no other place to run to, Fatimah has lived in the shelter for four years. Fatimah lost her parents at the tender age of one-and-a-half years and was left with her step-brothers. At age seven, her brothers gave her out in marriage to an 80-year-old man who needed someone to bear him a son. He paid $526 and 120 sheep to Fatimah's brothers as dowry.

Fatimah's violent husband started beating her for her inability to bear a son for him. The repeated beating and rape got Fatimah admitted to the hospital. Her husband, who would not pay the hospital bill, fled. Fatimah's brothers re-married her to someone else (another abusive man). When her first husband returned, he was furious. He accused Fatimah of adultery and reported her to the Taliban court. Fatimah was sentenced to death by stoning. "They wanted other women to see me dead and deter them from going to the government," Fatimah laments, "they called and said they were going to stone me. Later on, a judge whom I can't name helped me ... Now that they are here, I don't know what to do" (17:24). The stories of Miriam and Fatimah are the exceptions to the carefully constructed idea that women's rights are protected under the Taliban rule in Afghanistan.

This is why Chimamanda Ngozie Adichie, a writer and storyteller from Nigeria, calls for more focus on stories instead of theories. In her lecture titled *Idolatry of theory: a defence of storytelling* at the University of Cape Town's second Vice-

---

5   A pseudonym

Chancellor's Open Lecture for the year 2021,[6] Adichie (2021) argues that personal experiences should be respected and appreciated when dealing with theory. Unfortunately, this is often not the case. For "we are often afraid to run afoul of theory" she says, whereas "we should be afraid to run afoul of truth" (10:58). For the Taliban, it is important to maintain the front that women are safe in Afghanistan under their new rulership; whether that goes contrary to the truth evidenced in Miriam's and Fatimah's stories or not. Under the scrutiny of the entire world, this is perhaps a way to show that theirs is a better and preferred government. Therefore, all such stories that contradict their claims, or theory if you like, have to be suppressed at all costs.

During Adichie's (2021) lecture, she notes that it is often the case that we reject any ideas that interrupt our neatly concluded and accepted theory. Although she recognises that theory is important as it "gives us a framework to think about the world," she warns that "we should not give it primacy. Because when we do, we start to walk backwards. We go from theory to life. We start with theory and we try to make life fit our theory" (11:46). Life is messy. Stories illuminate the messiness of and the differences in human existence. Instead of embracing this reality, we often "try to make … life, fit into the neat and tidy confines of theory. And when life doesn't fit perfectly, we silence those bits that stick out. We pretend they are not there" (12:03). Just as the Taliban Judge ignored Miriam's rights and cries for help, "we look away because we must preserve the sanctity of theory. And so, we give to theory an exaggerated and uncritical reverence" (12:21).

To reinforce theories with stories is to "look back in other to look ahead" (Chawla, 2007, p. 26). This call for more stories is not oblivious to the fact that there are stories in the form of theories and theories in the form of stories. That is, the notion of theories as stories and stories as theories is not new

---

6   The lecture is available on University of Cape Town's YouTube Channel at https://www.youtube.com/watch?v=y4ixkKuYenE&t=2615s.

(a good example is Arthur's (1995) *The Wounded Storyteller*). But they remain an "uncommon approach to theoretical thinking" (Goodson, 2010, p. xiii). In fact, Goodson (2010) concludes that "theories are stories" (p. 11). Goodson arrived at this conclusion after he had accounted for the narrative and phenomenological propensities of theories to explain events "logically and meaningfully, often following narrative structures." This reinforces the symbiotic relationship between theories and stories and how stories are viable collaborators in the theorisation process. Demonstrating the particular role and impact of stories and lived experiences in the creation of theories, Hooks (1991) writes:

> I am grateful to the many women and men who dare to create theory from the location of pain and struggle, who courageously expose wounds to give us their experience to teach and guide, as a means to chart new theoretical journeys. Their work is liberatory. (p. 11).

Beyond theory, stories teach in a more personal way. Thus, theoretical and ideological underpinnings often emerge from stories told by community actors and the participants of history (Chawla, 2007). While it has been evidenced that stories play a part in the explanations and creation of some theories (Kim, 2015) it is however important to further stress the need for the reinforcement of theories with stories. The increasingly abstractive nature of theory, which "leaves a reader more rather than less confused about how to write a paper that contains strong theory" (Sutton & Staw, 1995, p. 371) is one of the reasons why the reiteration of the need for stories is important. In the preface to *Theory in Health Promotion Research and Practice: Thinking Outside the Box*, Goodson (2010) concedes that "theory can be a horribly abstract and unattractive topic" (p. xi). Stories are about meaning-making. Stories help to create "experienced meaning" as opposed to "abstract meanings" (O'Connor, 1969, p. 69). Thus, you tell a story when a statement or theoretical explanation would be inadequate to communicate meaning or would not help to fully experience that meaning (O'Connor, 1969).

A second reason to reiterate the need for stories in the reinforcement of theory is illustrated by Chawla (2007). In her article *Between Stories and Theories*, Chalwa (2007) demonstrates the constraints of the mainstream and its demand for the theorisation of stories, by acting as gatekeepers to the derivatives and implications of stories. The need to theorise and "operationalize" (p. 25) lived experiences seem to be more paramount than the stories being told or the storyteller. Faced with such constraints, Chawla adopts narrative theory in interrogating her participants because this was closest to what she desired. She longed to satisfy both divides. On one hand, she desired to account for the undiluted and uninterrupted narration of the Indian women who had experienced arranged marriages. Such personal narrations of lived experiences in the construction of theories have been described as a "fundamental cognitive process, which is crucial to the interpretation and reconstitution of cultural, social and personal reality" (Sinclair, 2005, p. 56). On the other hand, Chawla (2007) needed to satisfy the mainstream academic demand for the inclusion of formal theories in research. For her, narrative theory was the closest theoretical frame to resolving her dilemma.

The need to focus on stories and not force situations to fit into established theoretical models is one of the major propellers of the interdisciplinary alliance between the humanities and the medical discipline (Bates, 2014; Macnaughton, 2014). In dismantling the established or nuanced rigidity of the medical discipline, it has become evident that for far too long patients have been excluded from the treatment process. Patients are treated as objects of science and not as subjects with feelings, emotions, experiences, history, and identities (Bates, 2014). Their persona is often ignored in the process of healing as they get pulled and poked; just a bit higher than the relationship that exists between science and cadavers.

Nonetheless, Macnaughton (2014) thinks the alliance between medicine and the humanities has the capacity to turn this situation around. Her perspective on the matter is that

such change can and should be fostered through conversations with clinical scientists (and patients) in unconventional ways. Similar to the alternative paradigms prescribed by Carroll (1996), such conversations should be based on understandings that are conventionally alien to hospital spaces; "understandings that underpin individual experience" (Macnaughton, 2014, p. 31). Stories are a good source of such understanding.

Through the personal accounts of the women from Khayelitsha in South Africa who were HIV positive, the need for better and clearer communication between healthcare workers and their patients becomes evident. Because patients are often vulnerable and are at the shorter end of the power dynamic in a doctor-patient relationship, they are often at the mercy of the doctors' 'professional instructions', however abstract and ciphered that is. Vasquez (2004) narrates the story of Nwabisa, who is HIV-positive. She was pregnant while living with HIV. She had been told that her baby stands the risk of contracting the virus if she breastfeeds. Confronted with this difficult task, Nwabisa[7] in Vasquez (2004) explains:

> "...it was not so easy for me not to breastfeed ... When I went to Site B clinic to get my baby, maybe they saw to my folder that I'm HIV positive then the nurses forced me to get out of the bed then they forced me to breastfeed my child. I was confused because when they diagnosed my status they told me at the clinic that I will get the free formulas and I mustn't breastfeed my child because I can then give my child my HIV. It was very sad to me but I listened to those nurses and just did that." (p. 9).

If only the instructions given to Nwabisa were clearer and less abstract, her baby would have stayed HIV-negative. If only she was not so powerless and vulnerable in her relationship with the healthcare givers, perhaps she would have been

---

7   As cited in Vasquez (2004:9). The author has deliberately presented the Nwabisa's account as she said it with minimal editorial modifications. Hence the grammatical and structural inconsistencies in her account.

able to seek more clarity on her confusion. How about we change things a bit? Let us begin with the small stuff such as conversations instead of instructions; subjectivity instead of objectivity; clarity and simplicity instead of abstractions and ambiguities; and stories in addition to theories.

Two major issues have been raised against theory here: one is that theory can be too abstract and so it evades clarity and understanding. Secondly, that theory sometimes does not always give a true representation of lived realities. I reiterate that this chapter is not against theory, as theories are clearly important to higher education. However, theories are textual framings of events, lived experiences and ideas; sometimes removed from reality and often bereft of their humanity (Chawla 2007). They are often an obscure retelling of the actual story. Nonetheless, to quote Adichie (2021), "If we allow ourselves to be guided too closely by theory, we will end up being blinded by theory" (12:38).

References

Adichie, C. N. (2009, October 7). The danger of a single story [Video]. YouTube. https://www.ted.com/talks/chimamanda_ngozi_adichie_the_danger_of_a_single_story/transcript.

Adichie, C. N. (2021, July 28). *Idolatry of theory: A defence of storytelling* [Video]. YouTube. https://www.youtube.com/watch?v=y4ixkKuYenE&t=2615s.

Arthur, F. W. (1995). *The wounded storyteller: Body, illness and ethics* (2nd ed.). The University of Chicago Press. https://doi.org/10.1038/nm0196-98

Bates, V. (2014). Being human. In J. Holden, J. Kieffer, J. Newbigin, & S. Wright (Eds.), *Where does it hurt: The new world of the medical humanities* (pp. 8-11). Wellcome Trust. https://www.wellcomecollection.org/wheredoesithurt.

Bordwell, D., & Carroll, N. (1996). *Post-theory: Reconstructing film studies.* The University of Wisconsin Press.

Carroll, N. (1996). Prospects for film theory: A personal assessment. In D. Bordwell, & N. Carroll (Eds.), *Post-theory: reconstructing film studies* (pp.37–68). The University of   Wisconsin Press.

Chawla, D. (2007). Between stories and theories: Embodiments, disembodiments, and other struggles. Storytelling, Self, Society. *An Interdisciplinary Journal of Storytelling Studies*, 3(1), 16–30. https://doi.org/10.1207/s15505340sss0301_2

Clandinin, D., & Caine, V. (2008). Narrative inquiry. In L. M. Given (Ed.), *The sage   encyclopedia of qualitative research methods* (pp. 542–545). SAGE Publications. https://doi.org/10.4135/9781412963909.n275

Cohen, B. P. (1989). *Developing sociological knowledge: Theory and method.* Nelson–Hall.

Coleman, J. S. (1994). *Foundations of social theory.* Harvard University Press.

Collins, C. S., & Stockton, C. M. (2018). The central role of theory in qualitative research. *International Journal of Qualitative Methods*, 17(1), 1-10. https://doi.org/10.1177/1609406918797475

Craib, I. (2015). *Modern social theory.* Routledge. https://doi.org/10.4324/9781315656502

Denzin, N. K. (1986). Postmodern social theory. *Sociological Theory*, 4(2), 194–204. https://doi.org/10.2307/201888

Ford, E. (2020). Tell me your story: narrative inquiry in LIS research. *College & Research Libraries*, 81(2), 235. https://doi.org/10.5860/crl.81.2.235.

Goodson, P. (2010). *Theory in health promotion research and practice: Thinking outside the box.* Jones & Bartlett Publishers.

Hammond, M. (2018) 'An interesting paper but not sufficiently theoretical': What does theorising in social research look like? *Methodological Innovations,* 11(2), 1-10. https://doi.org/10.1177/2059799118787756.

Hoffman, M. (2003). Constructing a complex world: The frontiers of international relations theory and foreign policy-making. *Asian Journal of Political Science*, 11(3), 37 - 57. https://doi.org/10.1080/02185370308434226.

Hooks, B. (1991). Theory as liberatory practice. *Yale Journal of Law & Feminism,* 4, 1–12. http://digitalcommons.law.yale.edu/yjlf/vol4/iss1/2.

Hunter, I. (2006). The history of theory. *Critical Inquiry,* 33(1) 78-112. https://doi.org/10.1086/509747.

Kiley, M. (2015). 'I didn't have a clue what they were talking about': PhD candidates and theory. *Innovations in Education and Teaching International* 52(1): 52–63. https://doi.org/10.1080/14703297.2014.981835.

Kim, J. H. (2015). *Understanding narrative inquiry: The crafting and analysis of stories as research.* Sage publications. https://doi.org/10.4135/9781071802861

Knapp, S., & Michaels, W. B. (1982). Against theory. *Critical Inquiry,* 8(4), 723–742. https://doi.org/10.1086/448178

Lemert, C. (Ed.). (2017). *Social theory: The multicultural, global, and classic readings* (6th ed.). Routledge. https://doi.org/10.4324/9780429494635.

Macnaughton, J. (2014). 'Take a deep breath…'. In J. Holden, J. Kieffer, J. Newbigin, & S. Wright (Eds.), *Where does it hurt: The new world of the medical humanities* (pp. 28-   31). Wellcome Trust. https://ugc.futurelearn.com/uploads/files/22/c9/22c964eb-3fa2-40d0-916b-85e391c43c9d/Take_a_deep_breath_Jane_Macnaughton_pp._28-31_-_Where_does_it_hurt.pdf.

Merton, R. K. (1967). *On theoretical sociology.* Free Press.

Moore, M. G. (1991). Editorial: Distance education theory. *The American Journal of Distance Education.* 5(3), 1-6. https://doi.org/10.1080/08923649109526758

Muthukrishna, M., & Henrich, J. (2019). A problem in theory. *Nature Human Behaviour*, 3(3), 221–229. https://doi.org/10.1038/s41562-018-0522-1.

O'Connor, F. (1969) Writing short stories. In S. Fitzgerald, & R. Fitzgerald (Eds.), *Mystery and manners.* Straws and Giroux.

Randles, C. (2012). Phenomenology: A review of the literature. *Update: Applications of Research in Music Education,* 30(2), 11–21. https://doi.org/10.1177/8755123312436988.

Rasmussen, L. M. (2017) Role of theory in research. In D. Wyse, N. Selwyn, E. Smith, & L. E. Suter (Eds.), *The BERA/SAGE handbook for educational research* (pp. 53-71). SAGE Reference and British Educational Research Association.

Shatz, A. (Host). (2020, May 12). The theory truce [Audio podcast episode]. *LRB Podcast.* https://podcastaddict.com/episode/108675943.

Silvestri, F. (2022). Between madness and literature by Michel Foucault from a philosophical point of view of language. In A. V. Azcárate (Ed.), *Mind and matter: Challenges and opportunities in cognitive semiotics and aesthetics* (pp. 165-179). IntechOpen. https://doi.org/10.5772/intechopen.100358

Sinclair, J. (2005). The impact of stories. *The Electronic Journal of Knowledge Management,* 3(1), 53-64. http://www.ejkm.com.

Spinney, L. (2022, January 9) Are we witnessing the dawn of post-theory science? *The Guardian.* https://www.theguardian.com/technology/2022/jan/09/are-we-witnessing-the-dawn-of-post-theory-science.

Sutton, R. I., & Staw, B. M. (1995). What theory is not. *Administrative Science Quarterly*, 40(3), 371-384. https://doi.org/10.2307/2393788.

Tredell, N. (1984). Post-theory. *PN Review*, 11(3), 28. https://www. proquest.com/openview/45a2f5f6b804b562d58776b8a7a f01c5/1?pq-origsite=gscholar&cbl=1817849.

Turner, J. H. (2013). *Contemporary sociological theory*. SAGE Publications.

Van Manen, M. (2017). But is it phenomenology?. *Qualitative Health Research*, 27(6), 775-779. https://doi. org/10.1177/1049732317699570

Vasquez, G. (2004). *Body perceptions of HIV and AIDs: The memory box project.* Centre for Social Science Research, University of Cape Town. http://www.cssr.uct.ac.za/cssr/ publications/working-paper/2004/body-perceptions-hiv-and-aids-memory-box-project.

Yeung, I. (2022, February 13). *Life in the Taliban's Afghanistan* [Video]. YouTube. https://www.youtube.com/ watch?v=iIFi_Rgm-T8.

Conclusion

Constellations of Research, Innovation, and Internationalisation in Africa

Kehdinga George Fomunyam
Durban University of Technology

1. Introduction

African higher education has been experiencing tremendous growth for the past decade and this has resulted in the growth of research and innovation. The phenomenon of internationalisation has also grown tremendously in Africa as almost all nations and institutions are striving to develop one international component or another. National governments are increasingly paying more attention to higher education and increasing their investments in the same. This has created a new power dynamic in the higher education arena in Africa as some players have been more influential than others. Henderson (2015) argues that the higher education section is currently experiencing waves of internationalisation and globalisation, and researchers across the continent need to explore these phenomena so as to provide lenses with which we can try to describe and analyse what is happening in this rapidly shifting higher education terrain. Henderson continues that the shift in the balance of power we have witnessed and are currently witnessing, reflects both the provision and quality of higher education on the continent or regions of the continent outside of the traditionally dominant regions of the global North. African higher education is reasserting herself in the global higher education landscape and by so doing redefining its own path in the global stratosphere. The calls

for the decolonisation of higher education across Africa testify to this.

2.   Postures on research

Thompson and Walsham (2010) in their analysis of literature on disciplinary research in developing countries like those in Africa unravelled four thematic concerns: first amongst them is the over-concentration or focus on the institutional and/ or inter-institutional research context. This means much research on the continent still focusses on the university where the research was conducted, or on multiple universities, neglecting the country or the continent as a whole. The second is the concentration on design and/ or implementation of systems and approaches in a specific context. While design and implementation are important, the scope of the same also matters and this dictates the replicability of the same in other contexts. The third is where decision-making is located with regards to the purpose and shape of technology as it occurs in the marketplace. With the complicated nature of power dynamics across Africa, as well as the top-down approach with which most universities operate, decision-making will always be one-way; while the study of this can be very enlightening, it is also limiting. The fourth is the focus on engagement with other researchers and practitioners. Responding to this, Thompson and Walsham (2010, p. 113) argue that

> "in contrast, we argue … that aims to pursue a 'developmental' agenda needs to broaden, first, from an institutional to a global research frame to encompass a myriad of actors and their interests; second, from a focus on 'point' design and implementation to a wider critique that includes broader institutional, regulatory, and political infrastructures; and third, from examining… initiatives from a market-driven perspective to an engagement in strategic, policy-level debate about the transformative potential of education within broader developmental agendas. Finally, a 'developmental' … agenda calls for a committed engagement with literature, researchers, and practitioners across a range

of disciplines, implying a shift in the way in which ... research is planned and conducted".

The fourteen chapters in this book discuss a myriad of issues with some being contextual in scope, while others are continental. Nevertheless, the drive to enhance research, innovation, and internationalisation on the continent continuous.

3.   Postures on internationalisation

Internationalisation is increasingly gaining ground in the African higher education landscape with more and more national governments developing policies to guide the process of internationalisation on the continent. Writing about internationalisation on the African continent, Singh (2010, p. 271) argues that "African higher education has not only been a simple object of the internationalisation ideologies of others but has also developed a variety of accommodative and imitative behaviours which shift the epistemological gaze beyond the continent". This means that while the continent has been copying, it has also been working to develop its own approaches and strategies to drive the internationalisation process. The conversations and debates pinpointed in some of the chapters of this book attest to that. Carmody (2017) supports this when he argues that Africa-to-Africa investment at all levels accounted for about one-fifth of all new foreign investment projects in Africa and this cut across different sectors. Beyond this, Africa-to-Africa internationalisation (be it academic mobility, curriculum internationalisation, medium of instruction, research and collaborations or partnership, etc) has grown tremendously in the past decade reflecting the substantial and diverse nature of African-originating foreign direct investment as opposed to the more 'traditional' partners who come from the global North and parts of the global South to focus primarily on resource extraction. While the scope of internationalisation on the continent is increasingly gaining ground, the process of internationalisation itself has been varied and far-reaching.

The debates on what constitutes internationalisation as well as how internationalisation should unfold has not made the conversation very easy. However, easy or not, the process is unfolding, and Africa is gradually becoming a partner with a voice, and not participating by omission as the case might have been in the past, but participating by contributing in the global sphere.

4.   Postures on innovation

Smit, Williamson, and Padayachee (2013) argue that innovation does not necessarily directly consist of or is not a part of giant spaces of international advancements and ground-breaking accomplishments but consist of approaches or models which are new to the situation wherein they have been planned and engineered for the purpose of improvements. It is about reconfigurations or new configurations of current knowledge in applied contexts, with new context-oriented solutions emerging as innovation. Silver (2010) adding to this argues that what we understand as innovation is heavily dependent on where we find ourselves and why it (what we call innovation) is happening in our organisations, institution and or systems. Within the higher education arena, the innovator can be the institution, a group of researchers, an individual, a team or a committee, funding agency or a government department. Innovation in the higher education sphere is far-reaching and can range from novel technological inventions with patents, to teaching and learning practices or innovative research approaches, right down to theoretical development. Elrehail, Emeagwali, Alsaad, and Alzghoul (2018) add that there are several factors affecting innovation in higher education institutions and the response of different institutions to these challenges is what most often leads to innovation. To this end, innovation is the result of applied information and knowledge in certain situations and circumstances to generate new results. Silver (2010) concludes that there are several dimensions to innovation. The first is what he refers to as individual and group innovations, and this is often classroom- or course-

related, and often borne out of a quest to address student needs or professional concerns. This can result in new teaching methods, curriculum practices, curriculum matters and responsibilities, and assessment strategies amongst others. It could also be geared towards student-led seminars, and laboratory simulations. The second is disciplinary initiatives and this is sponsored by professional or disciplinary-related bodies or subject associations or interdisciplinary associations who focus on informal or formal collaborations amongst subject specialists across institutions. The third is innovations responding to the educational media and this takes advantage of new technologies to develop new solutions to old and new problems, or developing technological ware such as software, e-mail, open or resource-based learning materials etc. The fourth, he says, is curriculum-prompted innovations directed towards solving the challenges experienced in courses or the semester as a whole and this can range from new assessment procedures to new content or teaching approaches and theoretical underpinnings. The fifth is institutional initiatives which includes, but is not limited to, policies and decisions of many kinds relating to the same concerning information technology, work-based or resource-based learning and staff development processes; new structures, including educational development units and similar bodies, teaching and learning committees, and the appointment of senior management to oversee the developments (pro-vice chancellors, deans). The last but one is systemic initiatives which include, amongst other things, government creation of new institutions or the reconfiguration of old institutions in various ways to create different kinds of institution like Open Universities, green fields universities, the funding of system-wide change (Enterprise in Higher Education, work- and skills-related developments); national agency schemes to extend the use of computers and educational technology; national pressure groups (Royal Society, Higher Education for Capability, Open Learning Foundation). The last is systemic by-products which come from within higher education institutions resulting from system-wide policies and practices (Teaching Quality Assessment, changes in student funding).

5.   African higher education in Practice

The various national higher education systems which make up the African higher education systems have all contributed to the global system recognised today as African higher education. While the happenings in the different nations are too numerous to engage with here, it is important to look at a few initiatives that cut across the continent and how they are shaping the Africa higher education landscape. The first to be examined here is the harmonisation initiative. Adamu (2021) argues that harmonisation is the tool through which African higher education can make meaningful contribution to and be aligned with the African vision of integration. Harmonisation is not necessarily the same as standardisation, or the creation of uniformity in higher education systems, but rather the coordination of higher education efforts to provide better educational experiences on the African content. Two major strategies have been used to enhance the harmonisation agenda on the content. The two are academic mobility and programme development and implementation, and quality assurance and accreditation. The mobility of students, staff and researchers is one of the approaches that has contributed to the harmonisation agenda of African higher education. The Intra-Africa Academic Mobility Scheme, the Pan African University (PAU), the Mwalimu Nyerere Scholarship Scheme, and Tuning Africa are some initiatives on the continent that promote internationalisation and harmonisation of higher education through activities involving mobility, joint curriculum reform and development and teaching-learning improvement. Quality assurance and accreditation is the second strategy used to enhance harmonisation on the African continent. Enhancing the quality of higher education is a major strategy for the of harmonisation of higher education in Africa and since quality is at the heart of higher education, driving its achievement is at the heart of every higher education initiative. In Africa, there are numerous sub-continental quality assurance agencies and networks including the Southern African Quality Assurance Network (SAQAN), the Inter-University Council for East Africa (IUCEA), and the

African and Malagasy Council for Higher Education (CAMES) which are becoming more active and visible. Working in close collaboration with these is the African Quality Assurance Network (AfriQAN), which was established in 2009, to bridge the gap between these sub-continental networks.

The tuning higher education in Africa Pilot Project, an initiative of the African Union Commission and the European Commission, is another initiative that has greatly influenced education on the continent. Hahn and Teferra (2014) argue that the Tuning Project created an opportunity for higher education stakeholders to have meaningful dialogue on several topical issues in higher education. Not only did the project led to improved understanding of a graduate's competences but it also became a stepping-stone towards higher education continental needs. The project led to the development of conceptual frameworks and frames of reference for degree programmes in thematic core areas for the sustainable development of Africa, namely in Medicine, Agriculture, Teacher Education, Civil and Mechanical Engineering. This project resulted in the creation of quality guidelines for distance education developed by the African Council for Distance Education (ACDE). Tuning still remains a new lexicon in the African higher education landscape. In the "Tuning Africa" pilot project, some five dozen universities were involved—and this comprises a small critical mass of champion universities, along with supporting political and intermediary bodies. Hahn and Teferra (2014) further state that the systematic engagement of stakeholders from the public sector, the private sector, and the academic sector demanded a well-coordinated dialogue that was supported by higher education leadership at all levels. Moving forward, policy at continental level is clear, though different institutions need to implement similar initiatives at the institutional, national, and regional levels.

Woldegiorgis (2021) argues that African higher education institutions have a unique role to play in the socio-economic and historical contexts of Africa. African universities have a role to play in African societies, and to fully perform

this role, comprehension of global knowledge systems is needed. In a bid to re-imagine and contribute to the future of African higher education, the different chapters in this book have engaged multiple subjects. This book has provided answers to multiple questions on several issues in African higher education. The book provides a thorough analysis of major trends, developments, and challenges that the higher education sector is facing, and also provides solutions to some of the challenges.

References

Adamu, A. Y. (2021). Harmonisation of higher education in Africa: 20 years after the Bologna Process. *Tuning Journal for Higher Education, 9*(1), 103-126. https://doi.org/10.18543/tjhe-9(1)-2021pp103-126

Carmody, P. (2017). Africa-to-Africa internationalization: Key issues and outcomes. *South African Journal of International Affairs, 24*(2), 266-267. https://doi.org/10.1080/10220461.2017.1333037

Elrehail, H., Emeagwali, O. L., Alsaad, A., & Alzghoul, A. (2018). The impact of Transformational and Authentic leadership on innovation in higher education: The contingent role of knowledge sharing. *Telematics and Informatics, 35*(1), 55-67. https://doi.org/10.1016/j.tele.2017.09.018

Hahn, K., & Teferra, D. (2014). Tuning as instrument of systematic higher education reform and quality enhancement: The African experience. *Tuning Journal for Higher Education, 1*(1), 127-163. https://doi.org/10.18543/tjhe-1(1)-2013pp127-163

Henderson, E. F. (2015). 'Meaningful higher education'?: two lenses for re-thinking contemporary global university education. *Compare: A Journal of Comparative and International Education, 45*(5), 819-824. https://doi.org/10.1080/03057925.2013.861702

Silver, H. (2010). Managing to Innovate in Higher Education. *British Journal of Educational Studies, 47*(2), 145–156. https://doi.org/10.1111/1467-8527.00108

Singh, M. (2010). Re-orienting internationalisation in African higher education. *Globalisation, Societies and Education, 8*(2), 269–282. https://doi.org/10.1080/14767721003780439

Smit, B., Williamson, C., & Padayachee, A. (2013). PhD capacity-building, from aid to innovation: The SANPAD-SANTRUST experience. *Studies in Higher Education, 38*(3), 441–455. https://doi.org/10.1080/03075079.2013.773218

Thompson, M., & Walsham, G. (2010). ICT Research in Africa: Need for a Strategic Developmental Focus. *Information Technology for Development, 16*(2), 112–127. https://doi.org/10.1080/02681101003737390

Woldegiorgis, E. T. (2021). Configurations of progress and the historical trajectory of the future in African higher education. *Educational Philosophy and Theory*, 1–15. 10.1080/00131857.2021.1940955