



## Chapter 9

# A Transformative Framework for the Incorporation of Indigenous Knowledge Systems into the Curriculum in South Africa's Higher Education Institutions: How do we Centre Historically Marginalised Knowers and Knowledge?

Bonny Ngakane  and Benkosi Madlela 

### Abstract

During the prolonged colonial and apartheid era in South Africa, local knowledge systems were subjugated and deliberately excluded from the higher education curriculum. After the 1994 independence, many studies called for the incorporation of Indigenous Knowledge Systems (IKS) into the formal curriculum. The study by Madlela and Ngakane developed a transformative framework for the incorporation of IKS in South Africa's higher education curriculum to contextualise it. A detailed literature review of published journal articles and conference papers, books, dissertations, and theses inform the analysis in the chapter. Case studies relating to IKS integration into Australia's and the Philippines' higher education curricula were analysed and juxtaposed with African and South African case studies. This made it possible to benchmark and emulate best practices from others who have restored the dignity and rights of local people by successfully incorporating IKS into their education systems. The study is situated on the African Renaissance Theory and the constructivist teaching and learning theory. The study concludes that the curriculum in most institutions of higher



education in Africa, including South Africa, is still dominated by Western colonial content and policies that are antagonistic to IKS. It was further concluded that as people move from rural to urban areas, they tend to abandon their African culture and adopt Western culture. This makes lecturers and students fail to recognise the importance of IKS and the need to incorporate it into the university curriculum. The study recommended that institutions of higher education should develop indigenisation policy frameworks to guide the funding and holistic incorporation of IKS into the curriculum, train staff members and students, decolonise and transform the curriculum through holistic IKS incorporation, adopt the Madlela and Ngakane transformative framework alongside South African legal framework that supports IKS to holistically incorporate IKS into the curriculum across all faculties.

### **Introduction**

Koma (2018) notes that since the attainment of the democratic order, South African higher education continues to be European-Western driven and centred. Though the racist and oppressive apartheid system ended in 1994, epistemologies and knowledge systems in South African universities remain rooted in Western colonial epistemological traditions (Heleta 2016). The curriculum is still Eurocentric and reinforces white privilege and Western dominance. The Council of Higher Education (2017) states that decolonising the curriculum is a fundamental change in the nature and identity of institutions and the dismantling of the apparatus perceived to support and continue a colonial legacy. It requires an Africanisation or indigenisation of the curriculum to become more relevant to a changing student population. Du Plessis (2021) expresses that the decolonisation of universities involves people who were previously marginalised under apartheid, choosing to embrace and recognise their own cultures, tell their own histories, study from books written by Africans, and run institutions based on values that are reflective of African culture, as opposed to Eurocentric models.

Scholars and academics such as Heleta (2016), Madlela (2017, 2022a, 2022b), Mabasa-Manganyi and Ntshangase (2021),

Ngulube et al. (2004), and many others call for the incorporation of Indigenous Knowledge Systems (IKS) into the formal curriculum in South Africa and other African countries. Ngulube et al. (2004) argue that the curriculum discourse in higher education should change the dominant Western perception of what counts as knowledge and bring about a university that is based on the universal notion of humanity, which resonates with IKS and their perception of the essence of humanity and *ubuntu*.

Heleta (2016) notes that though new policies speak about equality, equity, and transformation and change might be instituted, universities have done very little since 1994 to open up to different bodies and traditions of knowledge and knowledge-making in new and exploratory ways. McKaiser (2016) raises concerns that the South African higher education system remains a colonial outpost reproducing hegemonic identities instead of eliminating hegemony. Molefe (2016) posits that in 2015, South African students and a small number of progressive academics began a campaign to decolonise the university curriculum by ending the domination of Western epistemological traditions, histories, and figures. Heleta (2016) and Mabasa-Manganyi and Ntshangase (2021) call for the decolonisation and Africanisation of the curriculum which remains largely Eurocentric and continues to reinforce white privilege and Western dominance while at the same time being full of stereotypes and prejudices that demean views about Africa and its people. The curriculum can only be decolonised and Africanised through indigenisation. Higgs (2016) views the curriculum as a critical element in the transformation of higher education and calls for the inclusion of African epistemologies to decolonise higher education curriculum in South Africa.

In light of this background, the study was conducted to develop a transformative framework for the incorporation of IKS into South African institutions of higher education's curriculum. Successful integration of IKS into the curriculum would provide alternative worldviews and contextual epistemologies. Such a move would decolonise education in higher institutions of learning and make it relevant and responsive to the needs of the South African and African contexts. The study was embedded

in the African Renaissance Theory, which calls for Africa to develop using its own knowledge, and the constructivist theory of teaching and learning, which calls for a learner-centred approach grounded on learners' prior knowledge. Madlela (2022a) argues that learners tend to understand concepts better if their prior knowledge is utilised in class. In the African context, the foundation of the learners' prior knowledge is IKS.

### **A brief methodology overview**

Qualitative data was gathered through reviewing literature in published journal articles, conference papers, books, dissertations, theses, and policy documents. Ethical guidelines were observed by acknowledging all sources of information in the text and in the list of references. The study began by discussing its guiding theories, the African Renaissance Theory and the constructivist theory, and proceeded to conceptualise key terms such as IKS, decolonisation, and indigenisation to put the reader into perspective. It went further to discuss the challenges of integrating IKS into the curriculum of higher education institutions in South Africa. Based on the analysis of case studies of IKS and its integration into the curriculum in Africa and internationally, a Madlela and Ngakane transformative framework for IKS incorporation into higher education institutions' curricula was developed. The study ended by drawing conclusions and making recommendations.

The following three questions were used to guide the literature review:

1. What is decolonisation and indigenisation?
2. What are the challenges of incorporating IKS into the curriculum of higher education institutions in South Africa?
3. How can IKS be incorporated into the curriculum of higher education institutions in South Africa?

### **African Renaissance: A Framework for Centring IKS in Curricula of African Universities**

The African Renaissance was the study's main theoretical framework. Cossa (2009) asserts that the term 'African' defines

those things that are indigenous to Africa while Koma (2018) says that 'renaissance' means rebirth, renewal, or re-awakening. 'African Renaissance' therefore entails the rebirth and renewal of the African continent, taking into cognisance the social, political, economic, technological, and educational dimensions. The African Renaissance Institute defines 'African Renaissance' as a shift in the consciousness of an individual to re-establish diverse African traditional values, so as to embrace the responsibility of an individual to the community and that he/she together with others in the community are in charge of their own destiny (Cossa 2009).

Higgs (2016) argues that the call for an African Renaissance has been present in the period marking the nearly four decades of African post-independence. The process of decolonisation that unfolded during this period saw Africa assert its right to define itself within its own African context. Evaldsson and Wessels (2004) locate the roots of the African Renaissance in 1948 when a well-known West African academic, thinker, and author, Cheikh Anta Diop (1923-1986), published on an African Renaissance. Another example is Nigerian Nnamdi Azikiwe (1904-1996), who wrote the book *Renascent Africa* in 1937, in which he distinguished between an old and a coming, new Africa, which would be based on socio-economic regeneration, mental emancipation, and national self-determination. Great African leaders like Kwame Nkrumah also spoke about the African Renaissance (Evaldsson & Wessels 2004).

Evaldsson and Wessels (2004) note that former South African President Mbeki has played and continues to play an important role in the contemporary discourse on the African Renaissance. Cossa (2009) reveals that when Mbeki addressed the Corporate Council on Africa in Chantilly, VA, USA in April 1997, he formally introduced the term 'African Renaissance'. He also addressed an audience from academia, business, and politics in a meeting held on 28-29 September 1998 in Johannesburg, South Africa. The main objectives of the meeting were to define who we are and where we are going in the global community and to formulate practical strategies and solutions for future actions that would benefit the African masses (Cossa 2009). Koma (2018) notes that the concept of African Renaissance in higher education

is significant, as it offers a unique opportunity for Africans to define themselves and their agenda according to their realities, considering the realities of the world around them (Makgoba et al. 1999). It is about Africans being agents of their own history and masters of their destiny. Higgs and Van Wyk (2007) argue that the foundations of Africanised education are in the African philosophy which has to do with African experiences, concerns, and aspirations and how Africans construct knowledge.

Msila (2009) asserts that the call for an African Renaissance in the educational discourse seeks to demonstrate how African IKS can be utilised as a foundational resource for the socio-educational transformation in the African continent. Higgs and Van Wyk (2007) say that the Africanisation of knowledge has a bearing on a number of societal aspects such as the attainment of African identity, emancipation of education, and political and economic liberation. Higgs (2016) argues that a call for an African Renaissance in education insists that all transformative educators in Africa should embrace Indigenous African world views and ground their nations' education paradigms within an Indigenous African sociocultural and epistemological framework. This means that discourses of decolonising and Africanising education in Africa at all levels, including at higher education level, should be centred on Africa Renaissance theory and grounded on IKS. To incorporate IKS into the curriculum effectively, a transformative framework embedded in the principles of the African Renaissance Theory should guide the entire incorporation process. Successful incorporation of IKS into higher education institutions' curricula in South African will promote a constructivist approach to teaching and learning as learners will be able to build new concepts based on IKS that they already possess from their communities. This will make South African education relevant and responsive to the contextual needs of communities where learners come from.

### **Constructivist Teaching and Learning Theory**

The constructivist theory was used as a supporting lens to the African Renaissance Theory in guiding the study. The most popular constructivists' views include Piaget's 1964 cognitive

development, Vygotsky's 1978 zone of proximate development, and Bandura's 1986 social learning theory. Alanazi (2016) and Hein (1991) state that constructivists assert that learners construct knowledge for themselves. Attention therefore should be focused on learners and on creating collaborative and interactive environments. Hmelo-Silver et al. (2007) note that in constructivism, learners conceptualise and perceive concepts based on their prior experiences. This means that knowledge is constructed based on the knowledge that already exists in the minds of learners. Mayer (2014) also argues that learners need to have previous knowledge to build upon. In addition, Madlela (2017) asserts that learners' prior knowledge and experiences are engrossed in their local IKS. Consequently, Madlela (2022a) calls for the blending of constructivism and IKS to help learners to understand concepts better, actively participate in class, and construct new information using their prior knowledge.

Given our articulation in the prior section, it is our assertion that the African Renaissance Theory and the constructivist theory of teaching and learning work well together for thinking about how local knowledge that learners already possess is considered to facilitate teaching and learning. It is therefore essential for any curriculum, especially in the South African institutions of higher learning, to value learners' interests and build on what learners already know. It is vital to state that what learners already know is not Western knowledge, but it is their local IKS that they use on a daily basis in their families, communities, and other everyday institutions.

## **Conceptualisation of IKS**

Donato-Kinomis (2016) posits that IKS are local knowledge systems developed over centuries of experimentation and are passed orally from generation to generation. IKS has proven to be a perfect scaffold for sustainable development, connecting the past, the present, and the future. The North-West University Indigenous Knowledge Systems Centre (2022) states that IKS are the unique knowledges that have been developed by a particular culture in the local setting as they solved their survival challenges and sought for meaningful life. The IKS Centre stresses the fact

that Indigenous cultures and people have survived for centuries. This bears testimony that they had scientific knowledge of harnessing their environmental resources to meet their needs. IKS is called *kitso yasetso* in Setswana, *ulwazi lweSiNtu* in isiZulu, and *Ndivhonga ha mvelelena Vhuvha* in Venda.

IKS includes various interconnected aspects of local cultures like arts, music and dance, craft, agriculture, food preparation and preservation, animal husbandry and leather work, hunting, health and herbal medicine, nutrition, woodwork, architecture, leather and beading, commerce, leadership and management, and languages and folklore (Department of Science and Technology 2006; North-West University Indigenous Knowledge Systems Centre 2022).

### **Decolonisation and Indigenisation are Tools for Effective Higher Education Transformation**

Boti (2022) argues that there are many dimensions of transformation of higher education such as digital transformation, social transformation, curriculum transformation, leadership, governance and management, research and knowledge production, higher education funding, and transformation of institutional environments. This chapter focuses on higher education curriculum transformation. Watson et al. (2011) assert that curriculum transformation is part of a worldwide challenge that higher education institutions currently have to address to tackle inequality and oppression, and for professional development. The University of Pretoria (2016) expresses that curriculum transformation involves continuously rethinking and re-evaluating how teaching and learning are done. This includes responsiveness to and training in new pedagogical methodologies and approaches within disciplines. It further entails retrieving and foregrounding historically and presently marginalised narratives and an acknowledgement of IKS hitherto repressed in the South African context. Boti (2022) spells out that the South African higher education transformation embraces the empowerment of academics to develop teaching and learning curricula that contribute to society's development and the realisation of a

dignified, sustainable life for all Africans. Decolonisation and indigenisation can be used as instruments for transforming the curriculum of South African higher education institutions.

Ajani and Gamede (2021) say that in South Africa, the decolonisation of higher education gained prominence in 2015-2016 during the #RhodesMustFall and #FeesMustFall protests in the country's higher education institutions. Students called for the decolonisation of higher education curricula to ensure reflection of South Africa's diverse realities. Matiwane (2017) argues that decolonisation is about unlearning, deconstructing, and dismantling the cultural violence of dehumanisation as a culmination of the systemic oppression of colonisation. It is about gaining and building a national consciousness that progressively and independently allows for the optimum actualisation of the self without bondages to the oppressor. This requires the creation of alternative knowledge and knowledge systems (Matiwane 2017).

Guerzoni (2020) and Harvey and Russell-Mundine (2019) view decolonisation as the removal or reorganisation of structures, ideologies, and discourses within a social institution which has historically perpetuated the privileging of Western people's ideologies and practices to the detriment and discrimination of Indigenous people's ideologies, languages, customs, and practices. It is usually accompanied by promoting and empowering of Indigenous people's ideologies, structures, and discourses.

Nakata (2017) argues that a key pedagogical feature of decolonisation involves emphasising the development of critical thinking and reflexivity skills, alongside the challenging of Western predispositions on Indigenous people's culture and knowledge. Tlostanova (2019) notes that to be truly successful, decolonisation requires the complete re-structuring of the university, an institution inherently Western in its structures, hierarchy, pedagogy, and ideology. It is pivotal to state that if Western colonial curriculum content, structures, and practices are to be successfully changed, decolonisation via the African Renaissance theoretical framework should be implemented concurrently and complementarily. The African Renaissance

theoretical framework and ideologies such as Black consciousness and *Ubuntu* should be used to educate and decolonise the minds of decision makers and all higher education stakeholders. In Steve Biko's words, decolonisation should begin from the mind (Ajani & Gamede 2021). Hence, the chapter views indigenisation as a vital local tool that can be leveraged to decolonise the mind and the curriculum. This aligns with Fanon's 2008 views in his book *Black skins, white masks*, where he affirms the need to liberate Black students by decolonising their minds to dismantle Eurocentric learning experiences. The chapter views curriculum indigenisation as a giant step towards decolonisation and Africanisation of the curriculum to make it relevant and responsive to contextual local needs.

Le Grange (2018) posits that curriculum indigenisation involves the incorporation of Indigenous epistemes and content within the units of a discipline and the overarching degree as a whole. Harvey and Russell-Mundine (2019) state that Indigenous epistemology involves students learning from Indigenous people whilst content involves learning about Indigenous people. According to Yunkaporta (2019), Indigenous epistemology incorporates the repository of knowledge of a traditional group of people whose knowledge is held through songs, stories, and art. Traditional holders of this knowledge should be recognised as experts in their cultural fields in the same way Western scholars are recognised.

Rigney (2017) views indigenisation as a multi-layered and holistic university-level and university-wide organisational change initiative guided by the respect for and recognition of Indigenous people's culture and knowledge. It involves the reorganisation of the university to be more inclusive and representative of Indigenous people, perspectives, and places. It includes the incorporation of Indigenous perspectives, content, and knowledge within the curriculum including pedagogy, structures, provision of Indigenous facilitates in campuses, and space on boards and committees, personnel, and governance. Newcastle University in Australia brought Indigenous perspectives into its faculties, including the faculty of law. Out of 24 units offered in the law curriculum, 15 of them included

Indigenous issues in their content. Interesting content involved Indigenous law and customary law, property law, Indigenous cases, and Indigenous perspectives on legal issues (Maguire & Young 2016). Bringing Indigenous content into the curriculum the way Newcastle University did makes the curriculum inclusive and representative of Indigenous people's cultural perspectives.

In the context of South African institutions of higher education, Indigenous content should be included in the curriculum of programmes in all faculties. For example, in the faculty of law, the African Indigenous justice system should be incorporated into the law curriculum. In the faculty of health, Indigenous pharmacology and medicinal practices should be incorporated into programmes. In the faculty of commerce, Indigenous entrepreneurship can be incorporated into business programmes, etc. On institutional governance issues, Indigenous people should be included in the university governance committees like the research ethics committee, etc. because research is conducted in their communities. They should also be included in the university's higher decision-making bodies like the academic council and the senate. Experts and custodians of Indigenous knowledge should be involved in curriculum development and implementation. This would promote inclusiveness, balanced representation, and decisions that serve the interests of Indigenous African people. In addition, the environment around the institution should be given an Indigenous outlook and transformed from the colonial one. Doing so would restore the dignity of Indigenous people that was degraded and violated during the colonial and apartheid eras and continues to be trampled by neo-colonisers and imperialists many years after the attainment of independence.

### **Challenges of Integrating IKS into the Curricula of Higher Education Institutions**

In our review, we found that incorporating IKS into the curriculum was not easy. The reasons for this were multiple, but the first reason was historical power inequalities. For example, Kaya (2014) sees IKS as facing challenges due to unbalanced power relations

stemming from colonialism and other forms of imperialism that allowed other nations and cultures to universally impose their knowledge systems, cultures, and languages on local people.

Secondly, the issues barring effective incorporation of IKS into the curriculum emanate from lack of availability of materials to work from. Banes and Baniqued-Dela Cruz (2021) view the following as challenges experienced in the integration of IKS into the formal curriculum: limited IKS reference materials, limited knowledge and cultural exposure, limited appreciation of IKS among faculty members, and a lack of university mechanism in monitoring the integration of IKS into the curriculum. Ngohayon and Gonzales (2011) assert that changing context is a factor in the lack of IKS appreciation. As people migrate to cities for education and job opportunities and get detached from their Indigenous communities, they start to practice city lifestyles that have been influenced by Western education and culture for years. It should be noted that Western influence has forced most African people to be too dependent on irrelevant, ineffective, and unproductive external Western solutions to their local problems. Banes and Baniqued-Dela Cruz (2021) assert that the perspectives of students and educators about Indigenous cultures have been changed by modernity.

Third, our analysis found that one of the biggest challenges is modernisation. For example, the introduction of Western education and modern technology led the current generation to perceive Indigenous cultures as backwards and not fitting in their current time. Younger generations have a tendency to be more open to Western culture than their local cultures. Banes and Baniqued-Dela Cruz's (2021) study revealed that modern technology discarded traditional agricultural ways of irrigation and harvesting rice grains. This resulted in most community members abandoning those ways and embarking on modern agricultural technology like water hoses and tractors. It can be argued that problems arise though because most people in African communities cannot afford modern agricultural equipment. After abandoning traditional ways of agriculture that managed to sustain communities for centuries, they lose self-reliance and end up relying on donated handouts.

Fourthly, the ideas about Africa and its lack of useful knowledge by colonialists influenced to a large extent the history of neglecting IKS in the higher education sector. In the context of South African higher education, Heleta (2016) says that the colonial and apartheid curriculum in South Africa stereotyped Africa and promoted white supremacy and dominance. As a result, Ramoupi (2014) states that the present curriculum in higher education still grossly reflects the colonial and apartheid worldviews and is disconnected from the realities of Africa including the lived experiences of the Black majority of South Africa. Pillay and Swanepoel (2018) argue that the South African higher education curriculum remains largely Eurocentric and continues to reinforce white and Western dominance. This kind of curriculum is incapable of moving the continent forward as it fails to develop students' critical and analytical skills needed to develop Africa.

It is necessary to state that Eurocentrism has pushed and continues to push African academics who teach about Africa to primarily rely on Western interpretations of the continent. The knowledge produced by African academics about Africa continues to be ignored. Ignoring contextual knowledge produced by African academics by policymakers has made it a big challenge for IKS to be incorporated in a meaningful way into the curriculum of higher education institutions in South Africa. Heleta (2016) calls for the dismantling of epistemic violence and Eurocentrism in South Africa. Doing so would result in the emancipation of long-excluded IKS and pave the way for its integration into the formal curriculum.

### **A Transformative Framework for the Integration of IKS into Higher Education Institutions' Curricula**

Notwithstanding the challenges of IKS use in university curricula, it is worth noting that our reviewed literature reveals that scholars and academics such as Heleta (2016), Madlela (2017; 2022), and Mabasa-Manganyi and Ntshangase (2021) advocate for the incorporation of IKS into the formal curriculum. The University of South Africa (UNISA) has passed a language policy that allows

examination questions to be asked in Indigenous languages and answers to be written in English or Afrikaans. This is a good step forward, but it is not enough, as Mabasa-Manganyi and Ntshangase (2021) call for the decolonisation of the South African curriculum content of courses and subjects in basic education and the higher education sectors as a whole.

North-West University (NWU) has established an IKS centre and has started to offer IKS programmes. Some of the programmes include a bachelor's degree in IKS (BIKS), etc. This move is commendable, but it falls far short of decolonising and indigenising the curriculum in a meaningful manner. As long as colonial and apartheid structures and attitudes are not removed and IKS given a major status in the curriculum, then marginalisation and exclusion of pertinent IKS will persist. This means that integration of IKS should go beyond the offering of a few programmes and the use of Indigenous languages into the use of Indigenous content in the broader formal curriculum in institutions of higher education.

Madlela (2017) argues that the use of Indigenous languages as mediums of instruction to deliver a curriculum laden with Western Knowledge Systems does not empower IKS at all. It still perpetuates Western imperialists' hegemony conveyed this time around in African languages. Eurocentrism is Eurocentrism whether conveyed in local languages or foreign languages. It still promotes a colonial mentality that continues to oppress African creativity and knowledge systems.

IKS can only be empowered if the whole curriculum content in all disciplines is decolonised and Africanised through the incorporation of IKS content. Such steps can only be possible if a transformative integration framework is developed and implemented. Based on benchmarks and analysis of IKS curriculum-related cases in countries such as Australia, the Philippines, and some African states, a Madlela and Ngakane transformative framework for the integration of IKS into the curriculum of higher education institutions was developed. The framework is also anchored on South African education policies

and law. Below is an analysis of how other countries managed to integrate IKS into their formal curriculum.

### **Australian IKS incorporation case studies**

Guerzoni (2020) discusses how universities such as Charles Sturt University and the University of Newcastle indigenised their curriculum in Australia. It should be noted that these cases are not absolute, but analysing them gives opportunities for benchmarks and adaptation to suit local contexts.

#### **Charles Sturt University**

Gainsford (2018) and Guerzoni (2020) describe the curriculum indigenisation process in a school of law that was undertaken at Charles Stuart University which was meant to develop the students' cultural competence. At the university level, staff members were given a cultural training programme involving Indigenous scholars, elders, and persons within the industry. Guerzoni (2020) says that embedding Indigenous cultural competence entails educating students on the richness of Indigenous cultures, the impact of history, and its contemporary social realities.

Gainsford and Evans (2017) give a case study of indigenising content within Charles Stuart University's Faculty of Business. The process was guided by the principles of the Cultural Competence Pedagogical Framework of 2009 and involved several stages, facilitated by an Indigenous consultant. Those stages were 1) preliminary work, 2) curricula indigenisation, and 3) implementation of Indigenous content embedding.

At the preliminary work stage, Gainsford and Evans (2017) say that the consultant established rapport and relationships with academics and undertook conversations concerning culture and seeking to initiate mutual learning. This opened the door for indigenisation and reduced the resistance that is normally associated with the top-down approach. Those scholars who disagreed with the indigenisation process targeted the consultant as the person to vent against (Gainsford & Evans 2017). Cultural competency of staff members was seen as essential in providing

the means of indigenisation at the faculty level to move people beyond simple compliance and create compassion and care for Indigenous people, culture, and knowledge.

At the curriculum indigenisation stage, the Indigenous consultant oversaw the indigenisation process. Specific content for the discipline was developed collaboratively and consultatively with Indigenous businesses and practitioners. Case studies tailored to the unit and the formation of partnerships with Indigenous businesses and practitioners were deemed valuable. This aided the understanding and valuing of Indigenous knowledge in businesses (Gainsford & Evans 2017).

Implementation of Indigenous content embedding was achieved through changes to the curriculum content, education of teaching staff, and establishment of supportive teaching environments (Gainsford & Evans 2017).

### **The University of Newcastle**

Guerzoni (2020) asserts that as a component of its audit in 2008, the University of Newcastle required its faculties, Business and Law, Education and Arts, Engineering and Built Environment, Health, Science and IT, to identify and report courses that did not include Indigenous knowledge. They were also required to identify courses that needed to be revised to include Indigenous content. Faculties reported varying commitments to indigenisation. Some of them indicated the introduction of specific Indigenous units within their degrees, while others readily integrated across the courses overall, for example within the Fine Arts. Maguire and Young (2016) spell out that in the university's law curriculum, 15 out of 24 units included Indigenous issues within their content, such as fights for native title in property law, Indigenous perspectives, Indigenous law, and customary law. Maguire and Young (2016) demonstrate how numerous legal subjects like property law, constitutional law, criminal law and procedure, and administrative law can be primarily indigenised through the introduction of Indigenous cases and having Indigenous perspectives on legal issues. Though some scholars argue that there is the understandable complaint of complexity surrounding

the indigenisation process, it is achievable through a structured integration of content and issues throughout legal units (Maguire & Young 2016).

Collins-Gearing and Smith (2016) describe the indigenisation of the English curriculum at the University of Newcastle through the gradual introduction of Indigenous texts within their English units. This involved the creation of an Indigenous literature unit where students could examine Indigenous texts. Since it was noted that there was no significant resistance from students, a children's literature unit was selected to incorporate Indigenous knowledge and content. Based on the case studies of Australian universities, it can be argued that UNISA should not stop at the introduction of the language policy that promotes Indigenous languages but should go a step further and incorporate IKS content into its curriculum across all faculties as Australian universities discussed above did.

### **Philippine IKS incorporation case studies**

According to Meneses (2003), the Philippines has more than 110 ethnic tribes and cultural communities whose cultures and traditions are in varying states. Their inheritance, cultural products, and practices are vanishing due to large-scale industrialisation and climate change. Environmental degrading projects like mining and climate change have affected their primary source of livelihood. The Philippines used their ancestral traditions to define their social relationships, values, and economic growth. The loss of their natural land, on which they depend for their traditional and cultural practices, meant disempowerment and loss of their cultural identity. In the late 1980s and 1990s, the Philippine government passed the Indigenous Peoples' Rights Act (IPRA), which maintains Indigenous people's lifestyles and guards against discrimination. The IPRA calls for the establishment of Indigenous schools. This led to the introduction of Filipino as a language of teaching and learning in schools. The Asian Council for People's Culture (ACPC) started a programme called Schools for Indigenous Knowledge and Traditions (SIKAT). The main agenda of SIKAT was to develop a system that aligned with mainstream education grounded on

Indigenous culture and traditions as a means for community development (Meneses 2003).

The national network of Indigenous educators who were considered to develop and promote a culturally responsive curriculum for the Indigenous Filipinos was facilitated by the inter-tribal council of elders. In addition to this, the Kalinga Declaration document was developed, and it entailed Indigenous education that recognises wisdom whilst maintaining cultural and spiritual traditions and worldviews. Following this document, ACPC facilitated tribal leaders' forums, curriculum development workshops, and teacher training in preparation for SIKAT. The main principles of the latter were based on ownership controlled by SIKAT's Council of Elders made up of 15 elected members of different tribes nationwide. Another principle consists of Indigenous people defining, developing, and implementing their own education and content. Inputs in the curricula, lesson plans, and manuals come from the Indigenous people involved in the SIKAT programme. Other principles were centred around cultural diversity and environmental sustainability rooted in day-to-day reality and recognition of quality basic education.

### **SAGU-ILAW SIKAT**

In 2002, SAGU-ILAW SIKAT tertiary school was established with the aim of training para-teachers in cooperation with ACPC and SIKAT. *Sagu-ilaw* means wisdom of the true, good and living story of Magbabaya (Abejuela 2007). The mediums of instruction used are English, Tagalog, Cebuano, and Binukid. Learners were introduced to the Philippine constitution and the IPRA Law during the first year of their studies. They were taught teaching methods, community development, literacy and numeracy skills, and traditional songs, dances, and art and craft. Indigenous and migrant culture was taught to avoid communication barriers between locals and migrants. Students were taught history, customary laws and heroes of the tribe, ethnic cultural practices and beliefs, rituals and ceremonies, and environmental conservation and protection. Traditional political leadership and the Philippine justice system were also taught. Learners were encouraged to conduct cultural research. This was a four-year

programme which was also inclusive to employ non-degree community members who were experienced in cultural traditions and practices (Abejuela 2007).

### **African states IKS integration cases**

Owour (2007) argues that there is less research in the area of African IKS due to the foreign paradigm and the realities of solving African problems using Western theories and methods. Western formal education has been a threat and a stumbling block to the African education systems. The cases below reflect how African education systems have been prejudiced while superiority was given to Western education systems.

#### **Dar es Salaam**

In Dar es Salaam, law students were against the Americanisation of the law syllabus. They wanted it to be readjusted and contextualised to Africa. Mazrui (1978) referred to African universities as multinational corporations with their headquarters outside Africa. African languages in most universities are not incorporated in the curriculum, yet French, English, Portuguese, and Afrikaans are studied. Despite this assertion, the University of Botswana (UB) offers short courses in African languages programmes such as Kiswahili, Ikalanga, Setswana, IsiZulu, and Shekgalagari. Botswana is currently working on infusing the Kiswahili language into the school curriculum after it was adopted by as the Southern African Development Community (SADC). Surprisingly, UB is offering degrees in international language programmes such as Portuguese, French, and Chinese. These foreign languages programmes are given more importance by the university than Indigenous language courses, which are currently offered just as short courses. This implies that a Botswana student will be more fluent in foreign languages than Indigenous languages that are only offered for nine weeks. This scenario reflects the need to transform the curriculum in African universities and give it an African identity.

Agricultural courses in African schools and universities are still centred around European models, textbooks, and climates.

African education systems ignored the Indigenous farming methods that have been successful and environmentally friendly for centuries. Education systems of the continent continue to promote Western farming methods that deplete the environment with toxic chemicals and also adversely contribute to climate change. Hart and Vorster's (2007) reveal that local African households rely on their Indigenous agricultural knowledge systems and practices to ensure a productive yield and alternative source of food supply despite the constraints imposed by poverty and drought. The Indigenous farming system therefore is an untapped source which can sustain agriculture, hence the need to be integrated into the university.

### **Kenya**

In Kenya, IKS is developed and sustained through traditional education transmitted to the dropout youths or those who did not attend formal education. This constitutes lifelong learning conducted by family members and clan tribes. The post-independence reform of the Kenyan government focused on the reconstruction of the curriculum to integrate IKS at all levels of the formal education system (Ominde Report 1964). This reflects that the integration of IKS into their education system is not a new phenomenon. It has been on their agenda since the 1960s, though little or no meaningful progress has been made up to date. Owour (2007) argues that there should be a paradigm shift that can decolonise Western curricula and reclaim African cultural identities. The Ominde Report (1964) states that curriculum reconstruction meant including Kenyan histories, cultures, oral literature, and teaching methods that would reflect IKS. It was within this realm that the first president of Kenya, Jomo Kenyatta, viewed education as a tool for maintaining the traditional structures of family, kinship, gender, and age groupings to ensure the stability of African ethnic communities (Kenyatta 1965). Without the stability of communities through the process of education, Kenyatta foresaw the onset of the disintegration of the social systems (Owour 2007).

## **South Africa**

The IKS policy in South Africa was adopted in 2006 to promote and protect IKS. One of the policy directives is the integration of IKS into the education system of South Africa including universities. The North-West province leveraged this policy by incorporating IKS into research, teaching, learning, and community engagement in NWU. This university is the only local institution, and in Africa, offering an accredited IKS programme (Kaya & Seleti 2013). This programme is limited to a multidisciplinary Bachelor in Indigenous Knowledge Systems (BIKS). It attracts students from South Africa, Botswana, Zimbabwe, Zambia, Nigeria, and Cameroon. This alone indicates the need for IKS incorporation into the curriculum of African universities. Though this is a milestone achievement, NWU is currently faced with challenges of integrating IKS across all of its campuses and system of education (Kaya & Seleti 2013). Kaya and Seleti's (2013) study revealed that the current primary history content in South Africa represents very little African history, and participants advocated for the inclusion of IKS in the modern curriculum. IKS Centre in NWU works in partnership with UNISA, the University of Venda (UV), and the University of KwaZulu-Natal (UKZN) to facilitate research, education and training, information brokerage and networking.

UNISA has a language policy that recognises the use of IKS. The aim of the policy is to inform the use of local languages in all aspects of communication of the university, i.e., teaching and learning, research, public, and internal and external communication. The university however has not yet incorporated IKS content into the curriculum across its faculties. The South African IKS ACT (2019) identifies IKS as a national asset, a key component of human capital, decolonisation, social cohesion, transformation, and sustainable development. Institutions of higher learning can leverage IKS resources to decolonise and transform their curricula so that they can be responsive to the contextual needs of the country and the continent and serve as a viable engine of socio-economic development in the country, the entire continent, and beyond.

## **Madlela and Ngakane Transformative Framework for IKS Incorporation into Higher Education Institutions' Curricula**

The South African constitution, South African Indigenous Knowledge Systems Policy 2006, and the IKS Act 2019 support IKS and languages. The legal framework supports the incorporation of IKS and languages into the formal curriculum. Institutions of higher education in South Africa can leverage the legal support and incorporate IKS holistically into the curriculum to decolonise and contextualise the curriculum so that it becomes relevant and capable of addressing lived experiences and realities of South Africa and Africa as a continent. The study developed a Madlela and Ngakane transformative framework that can be used by institutions of higher education to incorporate IKS into their curricula to decolonise and transform them. The model is based on the information generated by the study pertaining to IKS incorporation into the curriculum in African countries and those outside Africa, like Australia and the Philippines. Best steps and practices from different countries have been benchmarked to develop the framework.

In Australia, the incorporation of IKS into the curriculum at Charles Sturt University was guided by the principles of the Cultural Competence Pedagogical Framework of 2009, and it involved stages that were facilitated by an Indigenous consultant. These stages were 1) preliminary work, 2) curricula indigenisation, and 3) implementation of Indigenous content embedding. These have been discussed in detail in the study. In the Philippines, IKS incorporation into the formal curriculum was inspired and guided by the Indigenous Peoples' Rights Act (IPRA) which was enacted by the government in the 1980s and 1990s. This act maintains Indigenous people's lifestyle and guards against discrimination. It also calls for the establishment of Indigenous schools. The Australian and Philippine cases show that the successful incorporation of IKS into the formal curriculum needs to be guided by a framework and also be supported by the law.

### **Madlela and Ngakane transformative framework stages**

The framework has the following five stages:

1. Stakeholder engagement and consultative forums
2. Indigenisation policy framework development
3. Promoting African consciousness
4. Decolonisation and transformation of the curriculum
5. Establishing a full-fledged IKS faculty and centre
6. Implementation, monitoring, evaluation, and report writing.

#### *1. Stakeholder engagement and consultative forums*

Transforming the curriculum through indigenisation cannot be done in silos – it needs wide stakeholder engagement and consultations. Gainsford and Evans (2017) say that at Charles Sturt University in Australia, the consultant engaged with the faculty to create rapport and set conditions for learning. At this stage, institutions of higher learning in South Africa can engage all stakeholders internally and externally. Stakeholders can include university staff members, students, alumni, IKS custodians and practitioners, academics, book publishers, communities, youths, community leaders, and the business community. A comprehensive stakeholder and consultation report needs to be compiled by higher education institutions at this stage.

#### *2. Indigenisation policy framework development*

Based on the stakeholder engagement and consultation report, an institution's indigenisation policy framework should be developed. Such a framework is essential as it would act as a roadmap and legal instrument for the incorporation of IKS into the curriculum. The policy should also be embedded in the African Renaissance Theory and African philosophy, the country's constitution, the IKS Policy 2006, and the IKS Act 2019. Embedding it in the law would save it from legal challenges likely to be launched by colonial architects and their supporters who are petrified with fear when they see Africans breaking the bonds of colonial oppression. The policy should be developed through stakeholder involvement and continuous consultations.

### **Promoting African consciousness**

Banes and Baniqued-Dela Cruz (2021) view the challenges experience in the integration of IKS into the formal curriculum as limited knowledge and cultural exposure and limited appreciation of IKS among faculty members. Ngohayon and Gonzales (2011) spell out that as people migrate to cities for education and job opportunities and get detached from their Indigenous communities, they start to practice city lifestyles that are influenced by Western education and culture. The perspectives of the majority of students and educators about Indigenous cultures have been changed by modernity. To decolonise students, staff members, and key stakeholders, African consciousness must be brought among their mist. The African Renaissance Theory can be used to bring that consciousness through interpreting, promoting, and transmitting African philosophy, thought, culture, and identity (Koma 2018). It is advisable to move to the next stage when everyone has been Africanised and understands and appreciates the incorporation of IKS into the formal curriculum in higher learning institutions. Workshops can be used at this stage, facilitated by IKS specialists, practitioners, and custodians including community leaders and resource persons.

#### *3. Decolonisation and transformation of the curriculum*

Once African consciousness has been successfully disseminated to all stakeholders at all levels, the crucial stage of incorporating IKS into the curriculum content can be undertaken. Some scholars call for incorporation by adding a few IKS modules or programmes. Some scholars think that using Indigenous languages as mediums of instruction or setting examination question papers in local languages is a sufficient incorporation of IKS into the formal curriculum. Madlela (2017) criticises such incorporation as weak and lacking the much-needed impact and meaningful transformation of the curriculum. Madlela (2017) calls for the holistic incorporation of IKS into the content of the formal curriculum. Western knowledge is inadequate in solving African problems. It has its own serious limitations and has dismally failed the continent. Hence, the African Renaissance Theory calls for the development of Africa based on African knowledge. IKS

needs to be incorporated in all faculties, programmes, modules, and study materials.

Maguire and Young (2016) assert that in Australia, the University of Newcastle indigenised its law curriculum. Out of 24 units offered, 15 of them included Indigenous issues within their content such as fights for native title in property law, Indigenous perspectives, Indigenous law, and customary law. The incorporation demonstrated how legal subjects like property law, constitutional law, and criminal law and procedure can be primarily indigenised through the introduction of Indigenous cases and having Indigenous perspectives on legal issues. This scenario shows that in all disciplines, IKS content can be meaningfully incorporated. For example, in the faculty of agriculture, sustainable Indigenous farming methods have more value to the curriculum than Western methods. Indigenous seeds are drought and disease resistant while Western GMO seeds are less drought resistant. Western imperialists imposed them on African farmers, and it resulted in perennial famine and dependence syndrome on handouts due to poor harvests. Seemingly, imposing GMO seeds was a deliberate move by Western imperialists to fail African agriculture so that Africans could be impoverished and forced to depend on unsustainable Western handouts that have oppressive conditions attached to them.

#### *4. Establishing a full-fledged IKS faculty and centre*

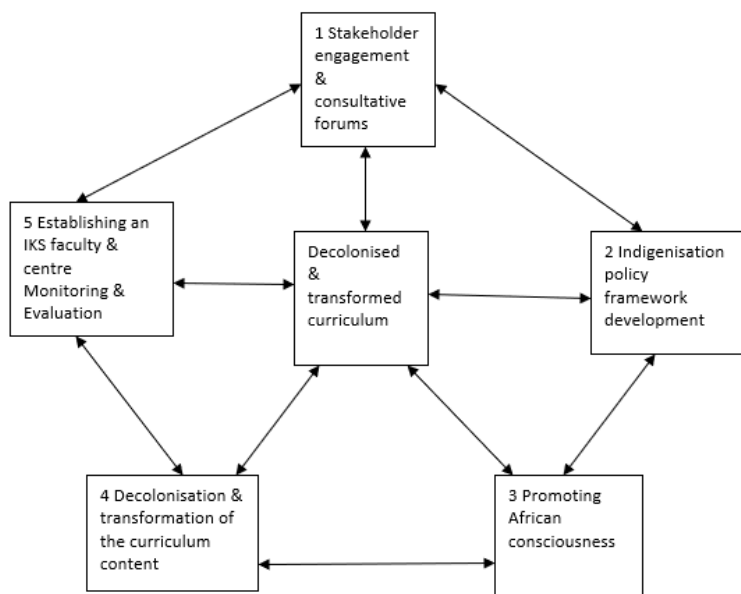
NWU has demonstrated that it can be done. Kaya and Seleti (2013) note that NWU is the only local institution and perhaps in Africa offering an accredited IKS bachelor degree programme. The programme attracts students from South Africa, Botswana, Zimbabwe, Zambia, Nigeria, and Cameroon. This shows that IKS programmes are in demand in Africa, but Africans are prejudiced since institutions of higher education do not offer them. Though NWU has made a good move, the programme offered is only limited to a multidisciplinary Bachelor in Indigenous Knowledge Systems (BIKS). This means that other faculties and disciplines are not covered.

In addition to offering a viable IKS programme, NWU has an IKS centre that works in partnership with UNISA, UV, and UKZN to facilitate research, education, training, etc. This also shows the viability of IKS. The Madlela and Ngakane framework at this stage calls for the establishment and launching of a fully-fledged IKS faculty with its executive dean and all structures. The faculty should offer a wide range of IKS programmes like any other university faculties. These programmes can focus on areas such as Indigenous agriculture, mining, medicine, architecture, pharmacology, disaster and environmental management, veterinary science, arts and culture, African languages, etc. UB offers short courses on African languages for only a few weeks, yet it offers full degree programmes in foreign languages like French, Portuguese, and Chinese. Instead of continuing the colonial hegemony of promoting foreign languages at the expense of Indigenous ones, higher education institutions should develop and offer full programmes of African languages in a fully-fledged IKS faculty. At this stage, an IKS centre can be established to act as a hub of IKS initiatives, projects, and activities.

### *5. Implementation, monitoring, evaluation, and report writing*

Once the curriculum decolonisation and transformation process has been completed, the decolonised and transformed curriculum should be disseminated and implemented immediately. Implementation should be followed by monitoring and formative evaluation. Formative evaluation helps to discover areas that need to be attended to before it is too late. It also makes summative evaluation easy since information is gathered on an ongoing basis. This information feeds into summative evaluation reports at the end of the year or programme cycle, which is usually two or three years. Evaluation reports inform future action plans.

### **Madlela and Ngakane Transformative Framework for IKS integration into HEIs curriculum**



**Figure 9.1:** Madlela and Ngakane Transformative Framework for IKS integration

The Madlela and Ngakane Transformative Framework has bidirectional arrows to demonstrate that the incorporation of IKS into the curriculum would not sail freely towards one direction. At times it would require returning to the previous stage for further analysis and verification. Higher education institutions in South Africa should play a significant role in making the holistic integration of IKS into the curriculum a success. It is difficult to achieve that without a guiding framework. Institutions can therefore adopt/adapt the Madlela and Ngakane Framework to their contexts and use it as a guiding framework alongside relevant legal documents and policies to integrate IKS holistically into their curriculum across all faculties in consultation with all stakeholders. Such integration would review, decolonise and reform the curriculum in South African institutions of higher education. Stakeholders that should be consulted

include academics, professionals, students, faculty leadership, researchers, book publishers, the business community, local communities, youths, community leaders, and IKS practitioners and custodians. This list is not exhaustive.

Institutions should enact an IKS policy framework to support IKS funding and incorporation into the formal curriculum. Institutions should also train staff members and students through workshops and seminars facilitated by specialists, professionals, and IKS custodians and practitioners and introduce them to the African philosophy and consciousness so that they embrace IKS. Finally, institutions should establish IKS centres and full-fledged IKS faculties offering a wide range of IKS programmes like Indigenous agriculture, veterinary science, medicine, pharmacology, astronomy, architecture, arts and culture, environment and disaster management, etc.

### **Conclusion**

From the reviewed literature and an analysis of IKS incorporation into the curriculum in African countries and those outside Africa, it was concluded that most institutions of higher education in Africa, including South Africa, have not yet incorporated IKS into their curriculum. Most of them still follow colonial policies that over-glorify Western knowledge and vilify IKS. It was also concluded that as people move from rural areas to urban areas, they tend to abandon their African culture and way of life to adopt Western culture and way of life. This makes lecturers and students in institutions of higher education fail to recognise the importance of IKS and the need to integrate it into the university or faculty curriculum. It was also concluded that with a guiding framework and policy guidelines, the integration of IKS into the curriculum of higher education institutions is possible. The University of Newcastle and Charles Sturt University in Australia managed to successfully integrate IKS into their curriculum under the guidance of the principles of the Cultural Competence Pedagogical Framework of 2009. The Philippines successfully integrated IKS into its schooling system through guidance from the Indigenous Peoples' Rights Act (IPRA). It was also concluded that NWU has

taken a good initiative that can be used by other institutions of higher education in the country as an initial benchmark.

It was finally concluded that under the guidance of the South African legal framework already stated in the study and the Madlela and Ngakane Transformative Framework for IKS integration into higher education institutions' curriculum, the country's institutions can successfully integrate IKS into their curriculum, which can result in decolonisation and transformation of education in South Africa's institutions of higher education.

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