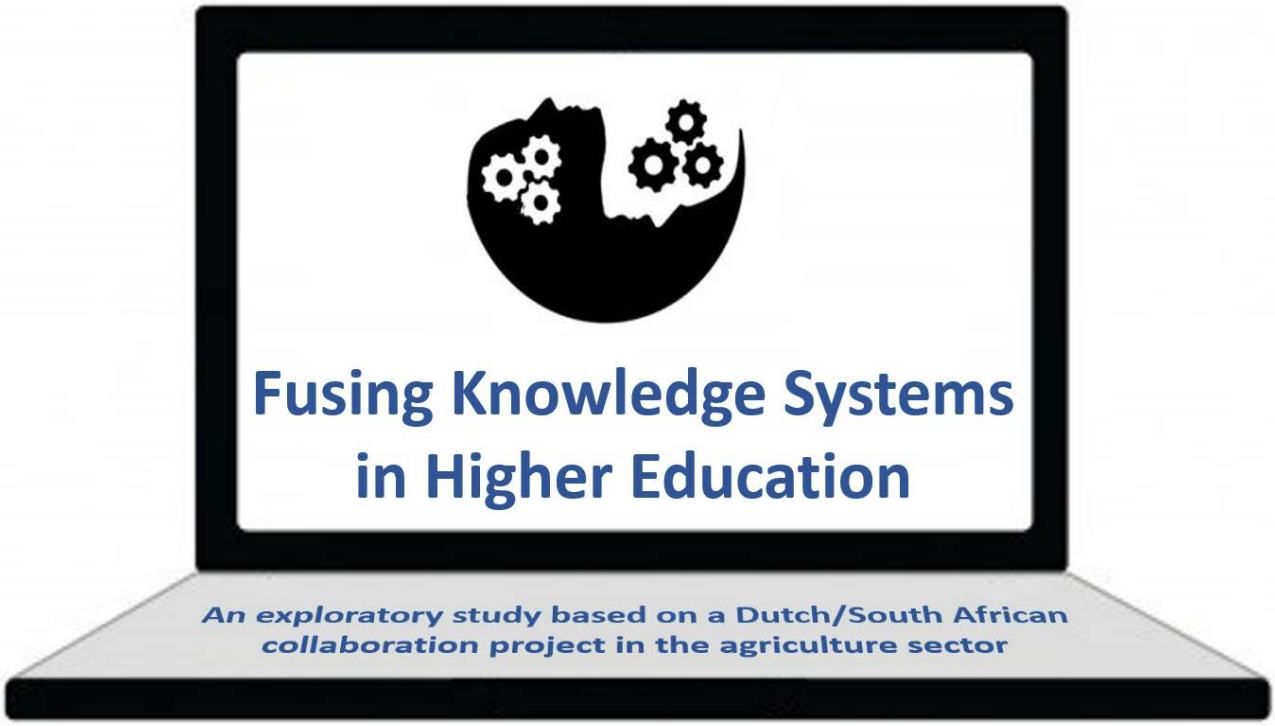

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Abstract

The critical challenges that humanity is confronted with can only be addressed through global collaboration and partnerships. In the education sector, this requires that different epistemologies are acknowledged and appropriate indigenous or traditional knowledge employed in local contexts. Incorporating less authoritative knowledge systems in the internationally dominant Western scientific higher education curricula, remains a challenge.

In the highly politicised context of globalisation this leads to intense theoretical debates. In Africa the mounting tension between proponents of internationalisation and Africanisation, and in South Africa specifically the rising demand for transformation and a decolonised curricula, impedes the fusion of local and-global knowledge paradigms.

Using a Dutch funded food and nutrition security collaboration project between selected Dutch and South African higher education agricultural institutes as research field, this study set out to determine to what extent South African academics support the inclusion of indigenous and local knowledge in their curricula, and to what degree this is realised in practice. In conclusion, the challenges and opportunities as perceived by the research participants, were clustered and summarised.

> Since that unfortunate date -1652- we have been experiencing a process of acculturation. It is perhaps presumptuous to call it 'acculturation' because this term implies a fusion of different cultures. - Steve Biko (1946-1977) I Write What I Like (1987: 40)

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Acronyms

ATC21S	Assessment and Teaching of 21st Century Skills
CBD	The Convention on Biological Diversity
CCFO	Critical-Cross-Field Outcomes
CHE	Council on Higher Education
CIKS	Centre for Indigenous Knowledge Systems
CoP	Communities of Practice
CPI	Country Plans of Implementation
CPTD	Continuing Professional Teacher Development
DHET	Department of Higher Education and Training
DST	Department of Science and Technology
DST	Department of Science and Technology
HE	Higher education
HEQC	Higher Education Quality Committee
HESA	Higher Education South Africa
ICS	International Council for Science
ICT	Information and Communications Technology
IEASA	International Education Association of South Africa
IK	Indigenous Knowledge
KZN	KwaZulu Natal
NCHE	National Commission on Higher Education
Neso	Netherlands Education Support Offices
NQF	National Qualifications Framework
NRF	National Research Foundation
OAU	Organisation of African Unity
OKP	Orange Knowledge Programme
PAR	Participatory Action Research
SAQA	South African Qualifications Authority
SDGs	Sustainable Development Goals
SEAD- SA	Strengthening Education and Agri-business interaction for sustained employment and agricultural Development in South Africa
TVET	Technical and Vocational Education and Training
UKZN	University of KwaZulu Natal
UNDRR	UN Office for Disaster Risk Reduction
WIPO	World Intellectual Property Organization
WPPSET	White Paper for Post-School Education and Training

1. Introduction

Whilst conducting conversations to collect data for this study, the UN Office for Disaster Risk Reduction (UNDRR) 2019 Global Assessment Report was released, stressing "[w]e are fast approaching the point where we may not be able to mitigate or repair impacts from realized cascading and systemic risk…" (2019: iii), and urges that:

> It is imperative that our understanding of risk is developed without resorting to reductive measures that isolate and remove from context… The lens of contextual enquiry and trans-contextual research is one that brings together disciplines and many other forms of knowledge, including the place-based wisdom of local practitioners and cultural and indigenous sensitivities (*Ibid*: v).

Higher education is key to achieving the Sustainable Development Goals (SGDs) of the 2030 Agenda for Sustainable Development. The well-being of the planet and conceivably human survival, depends on our ability to contextualise, adapt and resolve the interconnected social, economic, and environmental threats. To sustain life on earth, the significance of North-South equality and partnerships in higher education and research is universally acknowledged, but there is little consensus on how it should be done.

Investigating the future of higher education, UNESCO asserts that the emergence of knowledge societies offers prospects for sustainable development. Concluding that without more and better education, developing countries would find it increasingly difficult to benefit from the global knowledge economy, and warn against the threats of neglecting local and indigenous knowledge. "The information revolution reinforces the supremacy of technological and scientific knowledge over other kinds of knowledge such as know-how, indigenous knowledge, local knowledge, oral traditions, daily knowledge and so on" (2005: 148). This calls on Africa to realise its own innovative and sustainable knowledge systems whereby "the local reacts to the global by creating specific, if not unique responses" (Stromquist 2002: 63).

The mounting tension between proponents of internationalisation and decolonisation narratives impedes the fusion of local and-global knowledge paradigms. My research is pertinent in the context of escalating emotive discourses regarding seemingly conflicting Western and African epistemologies. The question I set out to determine was: *To what extent do South African higher education academics support the inclusion of less authoritative local sources of knowledge in their curricula, and to what degree is this realised in practice?*

1.1 Point of Departure

The decolonial narrative arose during the 16th century in resistance to European expansion and colonial imperialism. Opposing the structures of domination, indigenous, displaced and enslaved people in the Americas, Asia, Africa, Australia, Pacific and Caribbean Islands all fought for liberation, and this struggle is still going on in various forms. Pan-Africanism emerged early in the twentieth century as the African diaspora's reaction to Western hegemony, but African governments could only embrace these ideals after liberalisation. Afrocentrism prevailed during the demise of colonialism in the 1960/70s in many parts of Africa. Instituted in 1963, The Organisation of African Unity (OAU) weaved philosophies of Negritude and Africanisation into its Pan-African political narrative.

Independence also brought the need to decolonise education and infuse the curriculum with subjugated indigenous knowledge. Two of the most influential Pan-African political leaders, the first president of Ghana; Kwame Nkhrumah (1909 – 1972) and Julius Nyerere (1922 – 1999) first president of the new state of Tanzania, held particularly strong convictions on Africanising the higher education curricula. At the 1956 Accra University College opening, Nkrumah expressed: "We must in the development of our universities bear in mind that once it has been planted in the African soil it must take root amidst African traditions and

cultures" (cited in Ramaphosa 2016: n/p). Julius Nyerere's 1967 essay, *Education for Self- Reliance* states that the purpose of education,

> is to transmit from one generation to the next the accumulated wisdom and knowledge of the society (Minogue & Mollo 1974: p. 78), and further; 'educated people'- meaning those who have been through formal education…. under-estimates the value to our society of traditional knowledge and the wisdom which is often acquired by intelligent men and women as they experience life, even without their being able to read at all (*Ibid*: 84).

The work of Frantz Fanon (1925 – 1961) was also formative during this period. In *The Wretched of the Earth* he advises and cautions:

> We today can do everything… so long as we are not obsessed by the desire to catch up with Europe (1963: 312) … instead, let us decide not to imitate Europe (*Ibid*: 313). For Europe, for ourselves and for humanity, comrades, we must turn over a new leaf, we must work out new concepts, and try to set afoot a new man (*Ibid*: 315).

Many great critical African writers, such as Amilcar Cabral, Nadine Gordimer, Chinua Achebe, Wole Soyinka, Ngugi wa Thiong'o, Ama Ata Aidoo, Steve Biko, Achille Mbembe, and many more voiced the detrimental psychological impact of colonialism - and apartheid, on the African mind. Although they awakened African consciousness, the colonial subservient legacy is still reinforced through the Eurocentric worldview imparted through African education systems. In her opening address during the Higher Education Summit in Dakar, the former OAU chairperson Nkosazana Dlamini-Zuma, stressed that Africa's history of exploitation makes knowledge development crucial for social, cultural and political change, stating that: "Africa needs to develop its own knowledge. Only then can we be completely free" (2015: n/p).

The necessity to acknowledge and include indigenous epistemologies in education has become an intense theoretical debate during the last decades. It is not only Africa battling to recognise the value of their own knowledge systems, and incorporate it in their education curricula. In the Americas, Asia and Oceania, much has also been written and researched on decolonising and indigenising (the preferred term in most Commonwealth countries) higher education. The general focus is on community based- and participatory research. Although the following list is far from exhaustive, a few prominent published guidelines include:

- Louise Grenier *Working With Indigenous Knowledge A Guide For Researchers* (1998 Canada)
- Linda Tuhiwai Smith *Decolonizing Methodologies: Research and Indigenous Peoples* (1999 Kaupapa Mäori New Zealand)
- Bagele Chilisa *Indigenous Research Methodologies* (2012 Botswana)
- Maggie Walter and Chris Andersen *Indigenous Statistics: A Quantitative Research Methodology* (2013 Canada)
- Lori Lambert *Research for Indigenous Survival: Indigenous Research Methodologies in the Behavioral Sciences* (2014 USA, Canada & Australia)
- Susan Strega and Leslie Brown (eds.) *Research as Resistance: Revisiting Critical, Indigenous, and Anti-Oppressive Practices* (2015 Canada)

Guidelines to indigenise or integrate marginalised knowledge systems in education practice, are however limited. An extensive Internet search brought the following three guidelines to light:

Pulling Together: A Guide for Curriculum Developers by Asma-na-hi Antoine, Rachel Mason, Roberta Mason, Sophia Palahicky, and Carmen Rodriguez de France. This open educational resource was initially developed to support post-secondary institutions in British Columbia, Canada, and provides a way for all faculty staff members to indigenise their education curricula.

Teaching for Change: An African Philosophical Approach developed by Yusef Waghid at Stellenbosch University, South Africa. This Massive Online Open Course (MOOC) depicts teaching and learning in an African context, and aims to cultivate pedagogical encounters in relation to Africa.

Recording and Using Indigenous Knowledge an online manual, developed by the International Institute of Rural Reconstruction for the University of Waikato, New Zealand.

There are also two active online indigenous research network groups, namely:

i. The UNESCO Chair on Community Based Research and Social Responsibility in Higher Education that serves to build and enhance 'the emerging consensus in knowledge democracy'. Their 2016 Indigenous Research Methodologies publication (Easby & Brown 2016) provides an overview of different institutes' indigenous knowledge research journeys.
ii. The Alaska Native Science Commission which brings together research and science in partnership with the native communities. They have developed an Ethics and Protocol (1997) set of principles and procedures for collaborative research.

To date there is little understanding of ways to develop academically sound holistic approaches to fusing knowledge systems. Successes are not well documented or shared, and much work remains to be done to develop lecturers' skills to include indigenous knowledge in higher education.

1.2 Nuffic SEAD-SA Project

Nuffic, a Dutch semi-governmental organisation described as the 'house of internationalisation' in the entire education spectrum, focuses on capacity and institutional strengthening. Apart from offering students an opportunity to gain international and intercultural competencies, they also undertake to assist medium-and low-income countries in developing their own knowledge infrastructures in response to SDG 17: *Strengthen the means of implementation and revitalise the global partnership for sustainable development*.

Institutional collaboration projects initiated within the Orange Knowledge Programme (OKP) aspire to capacitise higher and vocational knowledge institutions in selected countries. Working through triple helix partnerships, i.e. governments, education institutions, NGOs and the private sector, they aim to bring the Dutch and the recipient country's educational institutes and industries together in one learning network. Projects are based on local needs described in Country-specific Plans of Implementation (CPI).

Based on the South African CPI (Nuffic 2018), and a study commissioned by the South African Embassy of the Kingdom of the Netherlands (Vijfhuizen & Letty 2017) to investigate collaboration opportunities between Dutch and South African agricultural education institutes, Nuffic published a call for a multi-year grant application in food and nutrition security. The grant was awarded in December 2018 to the **S**trengthening **E**ducation and **A**gri-business interaction for sustained employment and agricultural **D**evelopment in **S**outh **A**frica (SEAD- SA) project. A consortium was formed comprising of:

Dutch Lead Partner	**South African Lead Partner**
Aeres	Elangeni TVET College
Dutch Consortium Members	**South African Consortium Members**
Wageningen Centre for Development Innovation HAS University of Applied Sciences Lentiz, and Helicon	Cedara College of Agriculture Farmer Support Group - University of KwaZulu-Natal Institute of Natural Resources Stellenbosch University, and 23 other committed stakeholders

The SEAD-SA project addresses identified demands and capacity gaps assessed in the poultry, dairy and piggery sector in KwaZulu Natal (KZN) and the horticulture sector in Western Cape, and was launched in April 2018 under the auspices of the Netherlands Education Support Offices (NESO) based in Pretoria.

The identified needs for this project focuses on providing food and nutrition security and not *per se* the need to Africanise higher education curricula. This division is directly related to the binary conflict between food *security;* a Neo-Malthusian approach to feed growing populations with dwindling resources through large-scale technology driven farming, as opposed to food *sovereignty*; a bottoms-up food provision approach that advocates self-sufficiency through agroecology practices harnessing indigenous and local knowledge as an alternative means to sustainable food production.

> Binary thinking is a system of thought that considers things in an 'either' 'or' way, without considering any other alternatives.
>
> - The Urban Dictionary

These two opposing approaches are linked to the decolonising food and decolonising knowledge discourses. Using the SEAD-SA programme for further exploration, this study focusses on the latter, but examples used obviously include the first.

1.3 Description of Terms

Before continuing, the meaning of the notion of 'knowledge' first has to be clarified. Knowledge is an ambiguous concept, and many definitions and theories have attempted to explain it. A typical dictionary definition is; facts, information and skills acquired through experience or learning. Epistemology - the theory of knowledge, is still a matter of ongoing debate among philosophers, who broadly distinguish two categories of knowledge, namely;

i. Knowing; acquired through (i) acquaintance, i.e. personal experience - knowing of, (ii) procedural, i.e. acquired skills - knowing how, and (iii) propositional, i.e. learnt facts - knowing that.
ii. Justifying; based on (i) sensory perceptions, e.g. what you saw, heard, read, smelled, tasted or felt, and (ii) interpretation, e.g. what you remember or believe you saw, heard, read, smelled, tasted or felt.

A further distinction is made between tacit; personal wisdom embedded in the minds of people, and explicit knowledge, that is codified and documented knowledge.

The value assigned to -, the interaction between-, and how these categories of knowledge are collected and transmitted in different societies, is of further interest. In this research, a clear distinction is made between international or Western-based, and indigenous or local knowledge. In the international context, the notion of knowledge is based on Plato's classical definition that states knowledge must meet three criteria. It must be justified, true, and believed. This knowledge is acquired through study - mostly of academic scientific information obtained through rigorous research at higher learning institutions such as universities and technical colleges. On the other hand, indigenous knowledge forms part of a body of knowledge based on holistic physical, social and spiritual understandings that shape people's lives and inform their sense of being. There are a plethora of terms closely linked to indigenous knowledge, such as local-, traditional-, or endogenous knowledge, and even folklore and people's science. In this study indigenous knowledges are considered to include all these forms of knowledge, although a finer distinction is later made between indigenous and local knowledge. The fundamental difference between European and African knowledge systems is pertinent in the two axioms: *Cogito, ergo sum:* 'I think, therefore I am' and *Umuntu ngumuntu ngabantu*: 'I am because you are'.

This study unfolds in six chapters, including this one. The following chapter explores the politics of knowledge. From Foucault's knowledge-power as illustrated in the tension between internationalisation and Africanisation, to Freire's critical pedagogy approach, which is still relevant today in the context of

21st century learning skills. Chapter three describes the political framework in which the study was done, exploring South Africa's transformation policies, and the fourth chapter gives an overview of the research methodology and approach.

Chapter five is dedicated to an analysis of the sixteen research participants' views on the research question and finally the last chapter clusters the challenges they are confronted with, and lists possible solutions and opportunities that emerged during the study.

2. Theoretical and Conceptual Foundation

Dominant narratives in the global knowledge arena involve dynamics that can unquestionably be related to framing knowledge systems in binary opposites. These constructed oppositions represent the geopolitical and economic disparity in a polarised world, as evident in the distinctions between global North and South, scientific and indigenous knowledge, Euro- and Afrocentric, etc. The danger lurking in these divisions lies in the fact that "whenever there are polar opposition, there is dominance" (Elbow 1993: 22).

2.1 Scientific and Indigenous Knowledge

Difference in forms of investigation and knowledge gathering is perceived to create a deeply embedded division of what is generally understood as scientific or indigenous and local knowledge systems. It is often argued that science is rigorous, robust, dynamic, systematic, and objective, whilst indigenous knowledge is portrayed as static, illogical, unsystematic, and holistic, leading to the former being perceived as superior to the latter. The fact is that Western science is just one system of knowing and understanding the world. Other knowledge systems, embedded in a diversity of cultures sustain a variety of ways of living, and equally represent a rich and diverse knowledge pool.

The 1992 Rio Declaration on Environment and Development (Agenda 21) recognised the role that 'other knowledge systems' contribute to realising globally sustainable development objectives, and numerous international conventions and declarations have since followed. The UNESCO Declaration on Science notes that "traditional and local knowledge…. can … and has made, a valuable contribution to science and technology, and there is a need to preserve, protect, research and promote this cultural heritage and empirical knowledge" (1999: Annex I: 4). Acknowledging this, the International Council for Science (ICS) encourages closer links with other forms of knowledge. In their Science, Traditional Knowledge and Sustainable Development Report they consider traditional knowledge as a cumulative body of empirically-based knowledge developed through people's historical interaction with their environment, and "is therefore neither intended to be in competition with science, nor is such a competition the necessary result of their interaction" (ICS 2002: 11).

Documenting and scientifically validating indigenous knowledge is however a contentious topic. It is seen to contribute to preserving and legitimising indigenous and local knowledge systems but, on the other hand it is regarded as a form of neo-colonialization that reinforces supremacy of Western sciences. A further danger lies in exposing its knowledge holders to exploitation, appropriation or biopiracy. Protecting the rights of traditional knowledge and innovations is a complicated process that falls in the jurisdiction of intellectual property rights. The World Intellectual Property Organization (WIPO) is committed to protect traditional knowledge and cultural expressions, but doing this raises challenging question and "a host of policy and legal issues" (WIPO 2019: n/p). Their proposed international law: Protection of Traditional Knowledge, has remained in draft since 2007. WIPO works closely with the Convention on Biological Diversity (CBD) who concerns itself with protecting traditional knowledge, innovations and practices relevant for the conservation and sustainable use of biological diversity.

2.2 Knowledge and Power

The connection between knowledge and power is one of the most complex domains in international relations. Michel Foucault describes it as a dual relation; power influences the creation of knowledge, and knowledge induces power. Interwoven they become inseparable and continue to construct one another. In *Discipline & Punishment* he argues that "there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time, power relations" (1977: 27). He contends that when knowledge is linked to power, it not only assumes that it knows the truth, it has the power to make itself true. Reasoning in many of his works that truth is not

neutral or absolute, Foucault refers to 'regimes of truth' that confine our understanding of the world around us. Knowledge is endorsed by economic power blocks and is a product of a web of power relationships. Political power is maintained through accepting science as the only form of knowledge and excluding other paradigms of truth.

> …a form of power management and exercise that, through the judicial institution, became in Western culture, a way of authenticating truth, of acquiring and transmitting things that would be regarded as true. The inquiry is a form of knowledge-power (Foucault 1974: 52).

Foucault's *Archaeology of Human Sciences* (1970) demonstrates the disparity between diverse ways of ordering the world, and he argues that different epistemes are characterised by distinctive ways of looking at, and making sense of the world. Binary positioning subjugates knowledge and creates superiority over knowledge produced outside the dominant paradigm. As Foucault states, they are "either hidden behind more dominant knowledges … or have been explicitly disqualified as inadequate to their task or insufficiently elaborated: naive knowledges, located low down on the hierarchy, beneath the required level of cognition or scientificity" (1980: 82).

The Latin phrase '*scientia potentia est*' – **knowledge is power**, dates back to 1668.

It is more than ever true today, but with conditions as expressed by the research participants in this clip.

Knowledge in itself is not only an element of economic productivity, but also increasingly important to legitimise political decisions. As recipients of knowledge, our understanding and acceptance of truth is connected to these economic dynamics and political discourses. This is problematic when assuming knowledge is neutral, objective and singularly true, and impacts on how we interact with the world. Awareness of knowledge-power leads to a better understanding of the conflict between different knowledge systems and their socio-economic and political determinants.

Weiler (2003) argues that higher institutions (i) do not critically evaluate what knowledge is, (ii) is ignorant about the politics of knowledge, and (iii) does not address structural changes to acknowledge epistemological and political transformation of the contemporary knowledge culture.

2.3 Epistemic Disparities

Internationalisation and Africanisation are two powerful and potentially polarised forces that shape higher education, specifically in Africa. Pressured to provide students with international exposure and simultaneously offer a decolonial epistemological perspective, the relationship between these perceived binaries has to be examined.

Since the 1990s internationalisation has become a dominant factor in education, which can be understood in the context of global dynamics. "Internationalisation is changing the world of higher education, and globalisation is changing the world of internationalisation" (Knight 2008: 1).

Internationalisation is the process of integrating an international, intercultural, or global dimension into the purpose, functions and delivery of postsecondary education Jane Knight

There is a general perception that academic cooperation through aligning curricula, employing foreign academic staff, attracting students from other countries, and encouraging own students to further their studies abroad, is a valuable opportunity to raise education standard, and prepare students to participate in a globalised world. Seemingly internationalisation enriches the quality and relevance of education, and fosters appreciation for different ontological and epistemological views. It is also alleged that studying in a multicultural context reduces biases, stereotyping and potential conflict situations. Most importantly, through global partnerships, internationalisation strengthens nation states' capacity towards realising the SDGs.

The Africanisation narrative forms part of a larger discourse on restructuring African knowledge paradigms and transforming its education institutions. In the foreword address of Black *Perspectives on Tertiary Institutional Transformation*, Ramose states "It is a serious quest for a radical and veritable change of paradigm so that the African may enter into genuine and critical dialogical encounter with other pyramids of knowledge" (Seepe 1998, iv). The call on education institutions to Africanise involves four transformations, namely the (i) composition of students, academic and administrator bodies, (ii) syllabi and curricula, (iii) criteria for assessment and excellent research (Moulder 1995: 7), as well as the (iv) physical and cultural realities of institutions. While most Africanisation theorists agree on this in principle, there are different views on its practical application, specifically in context of internationalisation.

From an Afrocentric approach scholars such as Makgoba accuse African universities of purely imitating Western theories of knowledge, instead of capturing the essence of African culture and identity,

> Africans have a culture, a history, a way of thinking and doing things that are different but enriching. We communicate, interact, socialise and conceptualise issues from a different perspective, background and experience. We tend to look at the whole, we look for meaning and symbolism. We do not split or operate in a linear pattern of thinking (Makgoba 1997: 100).

Afrocentricity implies placing African culture at the centre of any analysis that involves studying African people Molefi Kete Asante

To reclaim the African epistemology, he stresses that academia must be grounded in African communities and prevailing curricula must be decontextualized. Such a transformation from Europeanism to Africanism involves major academic, intellectual and philosophical arguments about who and whose knowledge to teach, learn and research on the African continent (*Ibid*: 173- 174). For others, Africanisation does not necessarily entail a total rejection of alternative epistemologies. Recognising that knowledge determines people's particular worldviews, the challenge for Africa is "to build on local knowledge that exists in its people as a concomitant to working with global knowledge and information"(Odora Hoppers 2017: 3). Cross & Ndofirepi uphold that African academics have to stretch the horizon of their local knowledge into the global arena, "in other words, if their *world-classness* becomes an expression of their *Africanness*" (2016: 13, emphasis in original text). In this, internationalisation offers great opportunities, but to be worthy participants, African universities have to establish their own identities and develop their own strengths.

Whilst it is clear that wicked global challenges cannot singularly be addressed on a national or regional level, the international dimension of higher education creates many issues. Some highlights of a few Afrocentric criticisms relevant to this study:

- Internationalisation is a political soft power that upholds supremacy of the North. It promotes a capitalist-consumerist market, diminishing people to 'human capital', and transforms universities from 'public good' institutions to commercially tradable commodities.
- Neo-liberal ideologies dissipate national higher education and research, turning universities into knowledge factories that have to compete for resources, academic staff, students, etc.
- Western epistemologies epitomise Eurocentric domination and undermine fundamental local values including institutional autonomy, academic freedom, and social responsibilities.
- The 'from the West to the Rest' approach, is a form of neo-colonialism and cultural imperialism that erodes cultural diversity to create universal, homogenised global citizens.

"To challenge underlying assumptions of received knowledge while developing indigenous concepts, models, and theories" (Oppong 2013: 46) African scholars must be skilled to think critically.

2.4 Critical Pedagogy

The Frankfurt School critical pedagogy theory is based on Karl Marx's critique of capitalism and society. He asserted amongst other that dominant economic societies are the ruling intellectual force. “The class which has the means of material production at its disposal has control at the same time over the means of mental production” (Marx & Engels. n/d. 21). Awareness of who dominates a society, for what ends and how power is organised, is the foundation of critical pedagogy that aims to: “understand the deep meaning, root causes, social context, ideology, and personal consequences of any action, event, object, process, organization, experience, text, subject matter, policy, mass media, or discourse” (Shor 1992: 129).

Paulo Freire linked imbalances and inequality in society to unchallenged dominant ideologies and knowledge systems. To transform authoritarian, undemocratic and unequal distribution of power in learning institutions and society, he questioned “how can we ensure that scientific knowledge… coincides with the knowledge of the people?” (1989: 55). In *Pedagogy of the Oppressed* he writes:

> Education either functions as an instrument to facilitate the integration of the younger generation into the logic of the present system, or it becomes the practice of freedom, the means by which men and women participate in the transformation of their world (2005: 16).

Critically conscious people “…who think holistically and critically about their conditions reflect the highest development of thought and action” (Shor 1993: 32). Urging educators to stimulate their students’ heuristic thinking abilities and explore the connection between academic content and their lived experience, Freire states in *A Pedagogy for Liberation*, that educators should not only foster critical thinking, they should empower students to improve their living conditions (Shore & Freire 1987: 46).

Freire’s emancipatory education approach proposes that learner become co-creators of knowledge, and to achieve this, Shor (1993: 32) lists ten values that critical pedagogy ascribes to, namely:

i. *Participation*: the learning process is interactive and co-operative;
ii. *Situated*: the learning material relates to the students’ thoughts, language and living conditions;
iii. *Critical*: students critically reflect on their own knowledge, the quality of their learning process, the subject matter and its relation to society;
iv. *Democratic*: students evaluate and co-develop the curriculum;
v. *Dialogic*: students assert ownership of their education through dialogue;
vi. *De-socialisation*: students examine regressive values in society such as racism, sexism, biasness, homophobia, etc.;
vii. *Multicultural*: students explore the cultures and knowledge systems of dominant and non-dominant groups;
viii. *Research-oriented*: based on academic and community research on daily experiences, society, and academic material;
ix. *Activist*: students are active and interactive through problem posing, co-operative learning, and participatory formats, and
x. *Affective*: a critical, democratic classroom interested in the broadest development of social inquiry and conceptual habits of mind.

The critical pedagogic approach is still valid in today’s technologically enabled world in which emphasis has shifted from memorising facts and figures to what students can do with their knowledge.

As much as Information and Communications Technology (ICT) accelerates globalisation and subsequent political-economic disparities, it also brings tools to rectify these potentially destructive forces. The Internet is effecting considerable changes in education. Social media platforms and Web 2.0 tools shifts learners from being recipients of information to a participatory and collaborative environment.

ATC21S Categories	Skills
Ways of Thinking	Creativity and innovation Critical thinking Metacognition
Ways of Working	Communication Collaboration
Tools for Working	Information & ITC literacy
Living in the World	Local and global citizenship Personal & social responsibil

21st Century Skills – ATC21S

The Assessment and Teaching of 21st Century Skills (ATC21S) project identified four broad categories and accommodating skills, such as creative and critical thinking, and collaboration (Binkley, et al 2010: 1-2) that should be instilled in students to prepare them for success in this technologically advanced and uncertain globalised world.

To conclude in the words of Foucault: education may offer access to all discourses,

> but we well know that in its distribution, in what it permits and in what it prevents, it follows the well-trodden battle-lines of social conflict. Every educational system is a political means of maintaining or of modifying the appropriation of discourse, with the knowledge and the powers it carries with it (1972: 227).

To move away from discourses which force an epistemology onto others, dialogue is an existential necessity. Dialogue that also enables Fanon's 'wretched of the earth' to participate in naming the world. As Freire's depicts: "Those who have been denied their primordial right to speak must first reclaim this right and prevent the continuation of this dehumanizing aggression"(1970: 62). Because "it is only when we have a deep understanding of our experiences that we are able to conquer knowledge and concepts that are not part of that experience" (Dowling & Seepe 2003: 51). Africanisation appeals to Africans to uphold their aspirations, heritage, rights, self-worth and rationality in intercultural context, and non-Africans to respect and accommodate their efforts (Vorster 1995: 9). Hence the famous proverb quoted by Chinua Achebe:

Until the lions produce their own historians, the story of the hunt will glorify only the hunter

3. Higher Education Dynamics in South Africa

Education in South Africa is deeply entrenched in the country's colonial past during which knowledge was used as a powerful tool to dominate the country's people. For more than four hundred years, from the Dutch settlers arrival in 1652 to British occupation in the 19th century, followed by the 'Boers independence' in 1910, and the Nationalist party's separate development ideology, education has divided the country according to race, manipulated identity formation, and undermined the natural progress of knowledge production of all South Africans.

3.1 Post 1994 Transformation

The preamble in the Constitution of the Republic of South Africa, adopted after the first democratic elections in 1994, pledges to "[h]eal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights" (Gov.za: 1996: 1). A National Commission on Higher Education (NCHE) was appointed by the late President Nelson Mandela to formulate a vision for the future of higher education "[t]o preserve what is valuable and to address what is defective and requires transformation" (NCHE 1996: 1). Their recommendations culminated in the 1997 Education White Paper 3: *A programme for the transformation of higher education*, which produced a framework to create one co-ordinated education system with new governance and funding structures.

> This will enable us to overcome the fragmentation, inequality and inefficiency which are the legacy of the past, and create a learning society which releases the creative and intellectual energies of all our people towards meeting the goals of reconstruction and development (Department of Education 1997: 2).

This vision reflected in all subsequent policies, notably, the Higher Education Act of 1997, the National Plan for Higher Education 2001, and a New Institutional Landscape for Higher Education 2002, which all identified key priorities and provided the Department of Education with a framework to structurally transform higher education.

In the South African context, the term 'transformation' refers to changing from the apartheid system to a democratic and equitable society that is envisaged in the constitution Department of Higher Education & Training

The ideological transformation of higher education institutions was much more challenging. Discrimination, exclusion, injustice and inequality are deeply ingrained and tenacious. In response to an alarming racist incident at the University of the Free State in 2008, the cabinet appointed a Ministerial Committee on Transformation and Social Cohesion and the Elimination of Discrimination in Public Higher Education Institutions. Their mandate was to investigate the state of institutional racism and discrimination at all higher education institutions. The Committee found transformation a challenge facing all South African universities and a disconnection between policy and implementation. A report on their findings published by Universities South Africa, formerly known as Higher Education South Africa (HESA), further uncovered damning evidence of 'epistemic violence', and stressed the urgency to Africanise and decolonise the curriculum (HESA 2010). In response, the South African Vice-Chancellors association called for the inclusion of Integrated Transformation Plans in all universities' institutional plans. The Department of Higher Education and Training acknowledged that "….despite the advances made since the advent of democracy, the education system continues to replicate the divisions of the past" (DHET 2013: 1), and "much remains to be done to rid our country of the injustices of its colonial and apartheid past" (*Ibid*: 4); the White Paper for Post-School Education and Training (WPPSET) was adopted in November 2013.

The transformation envisaged by the NCHE however, remained elusive. In 2014 Ramoupi - a senior history lecturer at the University of the Witwatersrand, assessed that "the past twenty years of our liberation have disappointed and failed African research and scholarship in South African higher education institutions" (2014: 269). The lack of meaningful transformation ultimately spurred students to take up the challenge, and culminated in the 2015 # Rhodes Must Fall movement demanding the decolonisation of higher institutions, which rapidly spread to all South African universities. Reflecting on this protest, Achille Mbembe warned:

> Rhodes Must Fall was an important and necessary moment. The movement has won a tactical battle. But the struggle is only starting… We all seem to agree that there is something anachronistic, something entirely wrong … part of what is wrong with our institutions of higher learning is that they are… 'Westernized' in the sense that they are local instantiations of a dominant academic model based on a Eurocentric epistemic canon" (2016:4).

To fast-track ideological transformation, the Higher Education Amendment Act 9 of 2016 was promulgated, despite controversy regarding potential restraints of institutional autonomy and academic freedom. The Act makes provision for a Transformation Oversight Committee to determine transformation policies, targets and an oversight mechanisms. The transformation agenda is critically important and a very ambitious project. Although much has improved, higher education has not yet fully transformed. Student demonstrations in pursuit of substantive change, including the demand for new Africanised institutional cultures and the dismantling of Eurocentric hegemony in higher education are still ongoing.

3.2 Internationalisation and Indigenous Knowledge Policies

Issues around internationalisation and Africanisation deeply infiltrates the discourse on higher education transformation. WPPSET observed that internationalisation "has grown over the past two decades, and is a reflection of globalisation as well as of South Africa's return to the international community" (DHET 2013: 39). Listing its benefits, such as improving peace and security and contributing to achieving the SDGs, it also refers to the "complex effects of internationalisation on the South African system"(*Ibid* 2013: 40). The non-profit professional association International Education Association of South Africa (IEASA) has been pivotal in advancing internationalisation in their calling for a national policy to guide and regulate internationalisation. DHET eventually published a draft policy in 2017.

Simultaneously the WPPSET sees internationalisation "as an opportunity to take local and/or indigenous knowledge to the international community" (*Ibid* 2013: 40). The Department of Science and Technology (DST) had already published an Indigenous Knowledge Systems Policy in 2004, identifying indigenous knowledge as a key component of social transformation in higher education; stating that to effect the constitutional principles that underpin the values upon which the national education system is based, it must be "synergistic with and nurturing of IK [indigenous knowledge]"(DST 2004: 17), and urged DHET to "…take steps to begin the phased integration of IK into curricula and relevant accreditation frameworks" (*Ibid*: 18). While all transformation policies and planned programmes authorise universities to reinforce indigenisation within internationalisation, its realisation requires a crucial conceptual shift. The DHET Deputy Minister stated in his address to the 2018 Conference on Decolonising Knowledge, Teaching and Learning in Higher Education:

> Efforts to decolonise the curriculum, teaching and focus of research must therefore be undertaken at institutional level and with the involvement of the range of university constituencies… There are already a range of meaningful curriculum reform, teaching support and research development initiatives underway in most universities (Manamela 2018: 10-11).

A key challenge is the lack of capacity to implement such strategies in academia.

3.3 Curriculum Development and Quality Management

With internationalisation and decolonisation as a ongoing issue, curricula development at all South African higher education institutions is under scrutiny. Standard setting and quality assurance involves institutional oversight and program-based accreditation under the auspices of two statutory bodies

i. The Council on Higher Education (CHE) and its Higher Education Quality Committee (HEQC) audit quality assurance mechanisms and accredit higher education programmes "within the context of ongoing reform and restructuring, in order to produce a transformed higher education system of high quality which is able to address the complex knowledge development needs of South African society" (CHE 2004: 6).

ii. The South African Qualifications Authority (SAQA) defines the levels on the National Qualifications Framework (NQF) and its Education and Training Quality Assurance bodies accredits and awards qualifications within their appropriate sectors.

> The word 'curriculum' is used in South Africa as a broad concept that includes aspects such as standards setting, quality assurance, learning programme development and delivery SAQA

SAQA adopted outcomes-based education as a driver for systemic transformation, as expressed by Nkomo: "We need systemic change, not just curriculum or pedagogic change; we need a new driving vision for our system, not just a new paradigm for curriculum design and delivery in the classroom" (SAQA 2000: i). Registered qualifications and its underlying unit standards are described in terms of the learning outcomes that qualifying students have to demonstrate. Every registered unit standard has a declared purpose detailed in the (i) specific outcomes, which relate to the particular focus area of the study, and (ii) the following seven generic critical-cross-field outcomes (CCFO) that should inform all learning:

i. Identify and solve problems demonstrating that responsible decisions using critical and creative thinking, have been made;

ii. Work effectively with others as a member of a team, group, organisation, community;

iii. Organise and manage oneself and one's activities responsibly and effectively;

iv. Collect, analyse, organise and critically evaluate information;

v. Communicate effectively using visual, mathematical and/or language skills in oral and/or written presentation;

vi. Use science and technology effectively and critically, showing responsibility towards the environment and health of others, and

vii. Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

The values transferred through CCFOs, raise student's awareness of ethical implications and their social responsibilities. The last two outcomes (vi and vii) are of particular importance pertaining to this study, as it creates a space in every curriculum to stimulate critical assessment of 'Westernised' science and technology and infuse the learning content with an African holistic approach.

4. Research Methodology

Research is a process of systematically seeking to understand the world we are living in. The research methodology, which is commonly split into quantitative and qualitative methods, is the chosen approach in an inquiry. Research methodology is grounded on underlying paradigms – philosophical assumptions and set of believes, that shape the researcher's notion of research.

4.1 Philosophical Assumptions

Burrell and Morgan (1979) developed a scheme of paradigms, of which two philosophical assumptions are significantly important in this study and influence the chosen research methodology.

1) Ontology and epistemology

Theories on the nature of being are referred to as ontological assumptions and the search to obtain knowledge about this reality is termed epistemological assumptions. Each assumption effects the choice of employing a quantitative and/or qualitative method of inquiry.

Ontology poses the question 'what do we know about existence'? The quantitative researcher responds that there is one reality and it can be studied objectively by collecting hard data that statistically reflects the reality using surveys, experiments and observation tools. Qualitative researchers perceive multiple subjective realities. They explore different perspectives and collect individual views through interviews and focus group discussions.

Epistemology questions 'what is the truth'? Quantitative researchers respond through maintaining a distance between the researcher and participants so as not to influence the data they collect. Qualitative researchers establish a closer relationship with their participants to gain inside knowledge of how they perceive their realities.

2) Worldviews

Worldviews are shaped by the discipline, the research question and the researcher's experiences. These views also influence the choice of adopting a quantitative or/and qualitative approach. Four major worldviews are identified by Creswell (2009: 6).

Post-positivism	**Constructivism**
Determinism Reductionism Empirical observation & measurement Theory verification	Understanding Multiple participant meaning Social and historical construction Theory generation
Transformative	**Pragmatism**
Political Empowerment Issue-oriented Collaborative Change-orientated	Consequences of actions Problem-centred Pluralistic Realist-world practice oriented

Although the researcher's assumptions and worldview are mostly concealed in the research, these philosophical concepts influence the design and need to be identified beforehand.

4.2 Research Design

Research design is the broad plan on how data will be collected, and depends on the philosophical convictions of the researcher and the phenomenon being studied. In this study, I gathered and analysed qualitative data by means of a constructivist design applying an adaption of the phenomenology method. This is a research strategy in which "the researcher identifies the essence of human experiences about a phenomenon as described by participants in a study" (Creswell, 2009: 293). Phenomenology is mostly used in psychology and health related fields that focus on the meaning people give to their lived experience, an event or phenomenon. Through its systematic and methodical approach it is however applicable to all humanity studies that endeavour to understand an experience from a research participant's point of view. "We aim for fresh, complex, rich descriptions of a phenomenon as it is concretely lived" (Finlay, 2009: 6).

Phenomenology evolved in the early twentieth century in reaction to increasing empirical scientific approaches to understand human nature. The research method originated from the philosophical ideas of Edmund Husserl, who stated that human experience is the source of all knowledge. He indicated consciousness as the point of departure in social research and propagated transcendental phenomenology. Hereby research results, which are purely descriptive, do not intend to offer any conclusive solutions to the phenomena being studied (Husserl, 1983). His student Martin Heidegger developed it further in an approach called hermeneutic phenomenology, stating that "the meaning of phenomenological description as a method lies in interpretation" (1962: 37). These two competing visions stem from different philosophical values, but there is space for both in phenomenological research. "Rather than being fixed in stone, the different phenomenological approaches need to remain dynamic and undergo constant development as the field of qualitative research as a whole evolves" (Finlay, 2009: 17). The choice of which approach to apply depends on the type of phenomena investigated and the kind of knowledge the researcher seeks.

Creswell (2009) proposes that researchers follow a set procedure that entails:

i. Developing a research topic and question that seeks the meaning, experience or interpretation of a phenomenon.
ii. Exploring the philosophical paradigms - specifically the inherent assumptions and worldviews that influence the research approach.
iii. 'Bracketing' personal biases that Husserl termed *epoche*, "eidetic truths belonging to different levels of universality" (1962: 7), which should be applied throughout the research.
iv. Recording individual data from a small group of participants, typically through long in-depth semi-structured or informal interviews.
v. 'Horizontalization' through transcribing and identifying significant statements of each participant, to develop what Moustakas (1994) terms an 'essence description' of individual invariant textural descriptions.
vi. Clustering non-repetitive descriptions and uniting them in themes - composite textural descriptions, to create a synthesised description and deeper understanding of the phenomenon.
vii. In hermeneutic phenomenology, the process is taken one step further to interpret the question of Being – *Dasein* (Heidegger, 1962: 38).

Interested in the lived experiences of higher education lecturers' accommodation of different knowledge systems in their curriculum, I applied the Husserl-inspired transcendental phenomenology research approach.

4.3 Research Process

Exploring and describing the phenomenon from an etic rather than explaining and analysing it from an emic perspective, I aspired to portray in all its complexity and richness what was revealed by the participants.

1) Data collection

The phenomenological data collection process demands an in-depth study of people's experience. The sample does usually not include many participants, but it should be enough people to present sufficient experiences of the phenomenon being researched. Following this tradition I invited eighteen South African higher education lecturers, whose institutions are partnering in the Nuffic SEAD-SA project, to share their personal perceptions and describe their experience and challenges of including local knowledge in their institutions' current Western-dominated curricula.

Sixteen participants accepted and before our conversations began they signed a consent form (Annex B), which offered them ownership of their video recorded material but not anonymity. This enables me to use the material in my study, as well as any other future work. The topic is a political and racially sensitive issue in an exceptionally divided country, and to ensure candid responses I undertook to share the excerpts of their recordings that I select to include in my thesis with them, before submitting it for open access publication in the university's repository.

Interviews followed the phenomenological approach with lengthy, individual in-depth conversations. Participants received a guide (Annex C) during our introduction that gave an overview of the loosely structured conversation. The questions were intentionally open-ended to allow them the opportunity to voice their own thoughts and opinions. Further questions were based on their responses. The fact that the interviews were being recorded freed me from taking notes and I could focus my full attention on the conversation.

2) Data analysis

I based the organising and analysing of data on Moustakas (1994) qualitative adaptation of the Husserlian transcendental phenomenological approach, with a few modifications to accommodate the specific research. All the video-recorded interviews were transcribed verbatim. Watching every recording repeatedly brought back vivid recollections of each participant, and familiarised me with their individual experiences and perceptions.

The transcripts and recordings of the interviews formed the basis of my data. I then selected extracts from our conversations according to the horizontalization process. To do this, Moustakas (1994:121) advises asking two questions; (i) does the statement contain an experience that is essential to understanding the phenomenon, and (ii) can it be abstracted and labelled? I identified statements that adhered to these conditions, wrote textural descriptions and clipped the relevant tracks out of the recordings.

Through these descriptions and accounts I uncovered the invariant qualities of the phenomenon I was investigating. Repetitive and overlapping statements of all participants were clustered in similar-meaning units to form core themes. To give each participant a voice and convey their unique perceptions, I hyperlinked the clips from individual recordings in the written text. This process enables me to represent the essence of the phenomenon as a whole, whilst sharing insight in the lifeworld experience of individual participants.

4.4 Limitations

The limitations of this study, which to some extent reduce the generalisation of its conclusions, partly lies in the phenomenology research method, the temporal nature of experiences, and the politicised transformational higher education agenda in South Africa.

The main constraint was the fact that interviews are lengthy and demand a considerable investment of time from individual participants. Studying, transcribing and identifying the essence of all the recorded interviews is a laborious and time-consuming process. The small sample size can also be a limitation, particularly in this study that only approached some participants connected to the Nuffic SEAD-SA project. The contemporary limitation relates to the dynamically evolving education and knowledge sharing environment - in South Africa and globally. Further, due to the sensitive nature of the phenomenon, participants may fear that honest responses jeopardise their professional careers if published openly. Lastly, although horizontalization is applied, some bias has certainly influenced my choice in clustering individual invariant descriptions.

Striving to present the participants' testimonies as truly and realistically as possible, their rich accounts are presented in the following chapter.

5. Analysis of Conversations

Textual descriptions hyperlinked with visual clips from recordings of the participants' perceptions of the value of alternative knowledge systems in South Africa and their experiences of fusing knowledge systems in the higher education curriculum.

5.1 The Knowledge Dichotomy

Global knowledge is divided in categories that oppose and exclude each other, such as international vs. indigenous knowledge; Western-based vs. local knowledge, and scientific vs. traditional knowledge. Western knowledge is globally accepted as the norm. If we say global knowledge I would think it includes everything – but that is exactly what we don't have (Huba Boshoff). In the South, and South Africa in particular, these divisions are emotionally and politically laden and perceived as a form of neo-liberal and new-colonial power, driving the call for decolonisation of education. The injustice comes from depriving people of other knowledge systems and making only one knowledge system dominant (Hassan Kaya). We are living in a poli-epistemic world, composed of different knowledge systems, and these knowledge systems must be complimentary rather than competitive (Hassan Kaya)

Currently the South African higher education syllabus does not reflect the reality of the majority of the people. Looking back at things that should have been part of the syllabus it (IK) should have been there. (Lunga Dondo) and graduates are estranged from the communities they serve, …it was none of the stuff that I learned from the college. It was not part of the syllabus, but you get this knowledge that people know - it has been there from long ago (Zama Ngubane). You are not teaching robots in your class. You are dealing with living students that come into a class already possessing knowledge and experience. How are you able to tap into that and use it to enable them to learn more effectively? The aim is at the end of the day to develop a student's critical capacity for analysis – to draw well thought out, logical and reasonable conclusions, based on a myriad of sources available in terms of that particular subject (Mary Peters).

From a pedagogic point of view, incorporating local knowledge in the curriculum makes sense. It's a natural tendency to look for elements of yourself – of the familiar in practically everything that you do (Mary Peters). Learning can only take place if the knowledge relates to your own world. You can only build on what people know and understand (Hassan Kaya). Students are unreceptive when they do not connect with the learning material and lecturers are acutely aware of this. We feel our students are just passive, and I think that is because of the way that we teach – we almost take away their confidence in whatever they know already (Gayle Upton). On the other hand, working from the familiar stimulates student participation, as illustrated in practice:

> The discussions about rural farming and the way to handle the animals and how you can turn a rural farmer into an emerging farmer into a commercial farmer – that has their interest. We've had major fantastic discussions about that – debates in class where everybody participates (Heleen Els).

Acknowledging a person's past and present existence is essential to build self-confidence and self-esteem. The most fundamental aspect concerning education is raising consciousness. The kind of education that we have right now, in terms of African people doesn't paint a good picture of your heritage as an African person. To know where you are going and to be proud of the person that you are, you need to know where you come from (Lunga Dondo).

Despite the pressure for a decolonised education in South Africa, local and indigenous knowledge is only included in the curricula on a limited scale. Four factors that limits its incorporation stands out.

1) Perceived inferiority

The problem is created by making indigenous knowledge inferior to scientific knowledge (Mo Ngubane).There is a general understanding that traditional or indigenous methods tend to be more backward, and therefore it is not embraced in the academic world (Gayle Upton).

Subjecting a person need not only be in the form of physical abuse, exposure to only certain types of learning and certain types of knowledge reinforces their inferior status.(Mary Peters). This is illustrated in the example where students from marginalised societies are too embarrassed to share their experiences during lectures:

> I'm giving students seminars to do that they have to present in class and I always include the role of the communal farmer - how do you treat their animals, traditional medicine, etc. which is very interesting. I found that they don't want to do that. If they draw that topic they tend to shy away. They do not want to talk about it. The reason for that is unknow … I would have thought that they would like to extend their cultural knowledge to the other students – but there is no such signs. They really do not want to do that (Heleen Els).

2) Lack of scientific rigour

A general view is that Western science is validated through rigorous research and experimentation, and traditional knowledge is not based on deductive logic. The conflict between beliefs versus knowledge intensifies the argument, for example when the occurrence of a tornado is attributed to the 'water snake' moving from one river to another (Brigid Letty).

In Western scientists' search for universal validity, their text-book practices oversee the socio-cultural, political and ecological contexts. Proven and accepted methodologies are often unsuccessful when implemented in different environments, as illustrated:

> There are methodologies written by professors that are looked up to even though they failed dismally. For our methodology to be worthy of attention we need the people who created the methodology that failed to accredit us and say 'your methodology works'. It's unfair that for indigenous knowledge to be legitimate it needs scientific knowledge to accredit it. It means no one will take heed of our methodologies until we have proven scientifically that these methodologies are sustainable (Mo Ngubane).

3) Unrecorded and documented

Western knowledge is well documented and there are many resources**,** which makes it easier to teach. Indigenous knowledge is not well documents and a lot of it is more hearsay (Gayle Upton). This is exacerbated by the fact a lot of knowledge was passed down through an oral tradition. When lecturers want to include indigenous knowledge in balance with Western knowledge – do we know what we need to know and do we know what we have forgotten?(Mary Peters).

Often knowledge is stuck inside a proverb, song or drama, as the example given of a game that young people in the Northern part of KZN play, standing on one leg whilst reciting bird names to stay in the contest.

> The learners were able to name just over 350 bird names. Not only the naming of the bird. They know what it looks like, they know where it breeds – whether it has a nest in the tree or on the ground. They can tell you when it breeds, and which ones are no longer there. That historical data from an environmental, ecological and ontological perspective is huge. This knowledge is transmitted orally, it was never written down and it is stuck inside a game **(**Mayashree Chinsamy).

4) Conflict of interest

Although there is an indigenous knowledge policy in place, and in practice these are the methods people use, there is no pressure to include it in the curriculum (Heleen Els). There is also a gap in implementation, for example the curriculum outcomes in agriculture aims to be as current as possible, and that implies adopting Western methods that focus on large scale commercial farming, which is actually in contrast to what the Department of Agriculture is trying to achieve, they are trying to develop the small scale farmer (Gayle Upton). The government's implementation and development strategies are conflicting, for example:

> Agriculture in itself is very commercial driven, because we are very GDP based. Companies like Monsanto who have the biggest seed hubs, provide government tremendous support in terms of financial aid, seeds and chemicals to give to communities. When it comes to economic development, the Department of Agriculture is promoting this in the community. When kids go to university or TVET they are taught how to use chemicals, because of the commercial factor. They are not taught indigenous knowledge, it is actually lost at tertiary level (Avi Sahadeva).

It is essential for nation states to assume the responsibility of their own knowledge industry. A country evolving to the extent that they are taking control of the acquisition, the organising and generating of knowledge is a perfectly natural process and should be encouraged, but when you become emotive about it and start saying its either this or nothing else and talk about throwing the baby out with the bathwater, then it becomes an issue. (Mary Peters). The reality is that we cannot operate in silos. Globally we need to work together to move with the times and to stay updated in the industry. We need to integrate and partner with other countries to collaborate and share knowledge (Thuli Sibia).

Encouraging a balanced view is a prerequisite to make valid choices in what to include in the curriculum. If saying decolonisation means throwing out every single discovery – every single book that has been written that was not generated here in Africa then that is an issue. I think the issue is balance (Mary Peters). South African academics are seeking the balance in identifying and affirming local knowledge, whilst complying to global higher education quality standards.

5.2 Unpacking Indigenous Knowledge

The term indigenous knowledge raises two key questions.

1) When is someone indigenous?

I am indigenous even though people keep talking to me about India. I have no connection to the place. I have no ancestors living there. I have nobody that I even know there to go visit. (Vinay Rajah). To avoid excluding any home- grown and all locally adapted expertise, the knowledge of all communities should be included. If we say a combination of local and indigenous we draw from what is originally from here and it also says what is together now (Huba Boshoff).

2) What can be accepted as knowledge?

There is a misperception that decolonisation commands the exclusion of Western sciences. We have to start with the acceptance that there are certain indisputable facts, as the law of gravity and as the sciences applied in construction engineering (Mary Peters). Therefore you cannot sweep away one system and reintroduce a new one (Vinay Rajah), but instead include the values and principals of the people the knowledge is being transferred to. Specifically the fact that African knowledge takes you as a human being holistically – thus including the environment, as well as the physical and spiritual world - as evident in the African approach to traditional medicine, and food security practices (Hassan Kaya).

Ethics can also not be universalised, they must be cultural specific. They must appeal to the values and uses of the people themselves, that is why knowledge systems must be culturally and ecologically specific. Traditional African knowledge is steeped in the Ubuntu philosophy - the principals and values of the

relationship between humans and all other forms of life. There is a bond that connects humanity with the environment and the spiritual world - including the ancestors. There are certain things which a person cannot see, cannot feel, cannot touch because they are beyond your knowledge, but they are part of your knowledge system, which Western knowledge does not take into account (Hassan Kaya).

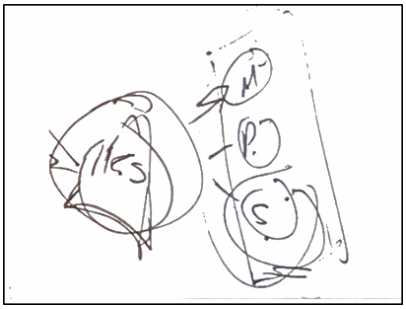
But how do you accommodate this philosophy in the academic world? For example, if you are studying geography at the University of Kwa-Zulu Natal, it would be okay if you said 'I'm going to do a study on local practices or local beliefs around weather phenomena', but they would assume that you are doing it from a point of 'I'm interested to know what people think, but it's not that I think it myself' How do you acknowledge people in what they believe? (Brigid Letty).Conversely, some academics raised concerns regarding harmful indigenous practices, such as:

> On the one hand you want to promote traditional medication, and on the other hand you don't. There are some terrible things going on that they think helps the animal, but it's just a case of animal cruelty. Like if a cow is down, sometimes they believe they have to cut off the tail, and with the blood the disease will come out and that will make the animal get up. That sort of thing is just a case of animal cruelty. There is no scientific evidence whatsoever to support such statements (Heleen Els).
>
> If you kill a python snake and bury it at the entrance to your kraal, your cattle are more likely to come home at night. I can't in my framework understand this belief and I can't believe it's right, because you are killing an endangered snake that is on the red data list (Brigid Letty).

Indigenous worldviews are deeply embedded in spiritual practices and this is one aspect that Western knowledge specifically minimises. When knowledge came to Africa they looked at all those things which are part and parcel of knowledge as primitive and unscientific. But people depend on those aspects (Hassan Kaya). From a Western science point of view, this complicates fusing knowledge systems. We go through a processes of identifying local innovations, but when you look at them, a lot of the things that you get are not technical innovations like how to make compost. It is a person who knows how to chase away rain so that it doesn't happen at a certain time of the year. What we ended up doing is we tried to categorise things. It's not for us to say whether it worked or didn't work, but we would try to highlight if something is a cultural belief (Brigid Letty).

When comparing Western and indigenous knowledge systems, it is important to recognise the value of both approaches. There have always been two systems of knowledge – there's been science and religion, and we like to make those opposed to each other, which to me are just two systems of knowledge that inform us (Steven Worth). The term 'indigenous' excludes other communities living in a specific geographical area, whereas reference to 'local' is more inclusive. Further, knowledge cannot simply be grouped in Western academic disciplines. One approach that could be acceptable in the academic domain, is through categorising sacred and secular knowledge and customs of all inhabitants of a region in local memory, local practice and local science (Steven Worth). This entails:

1) *Local memory* that refers to what people remember being done in the past. It mostly manifest as beliefs, myths and traditions that are orally transmitted over generations. Sometimes knowledge is inside a mechanism that we are not yet ready to understand and accept. It could be something stuck inside a proverb or a song, a drama or something to that effect and it may look and sound like a myth (Mayashree Chinsamy), but it profoundly influences peoples worldview.



2) *Local practice* which is based on memories that evolves through trial-and-error and external influences. The biggest challenge is that people think many things are indigenous, which in fact came from elsewhere. It has just been around so long that it feels indigenous (Steven Worth). Therefor you cannot

simple accept a local practice as being indigenous. *Elke ding het n geskiedenis konteks* (everything has a historical context). There is a reason why something became an accepted practice, and that is mostly a matter of 'opportunity'(Johan van Veenendaal).

3) *Local science* that develops when outcomes of conscious experimentation are absorbed in practice. This is the most powerful form of knowledge as it represents the willingness of a person to engage with scientific enquiry (Steven Worth), even if the research is not done very rigorously, the results are undisputable. Whether knowledge comes from research in a laboratory or done with the resources available at a community level, they are just two different knowledges to achieve one goal – which is to improve skills and knowledge and eventually eradicate poverty (Mo Ngubane).

Including local knowledge in the education curricula is a prerequisite for sustainable development as many communities still depend on their local knowledge for their livelihood and to survive. An interdisciplinary approach in health for example, is based on the fact that the majority of South Africans of all ages and professions still use traditional medicine for health care. It is based in the community and culturally acceptable. That is why the World Health Organisation defines health in a holistic way (Hassan Kaya).

The over-specialised Western world is gradually acknowledging the importance of approaching knowledge in a holistic way. As interdisciplinary approaches grows in the West, mapping the relation between humans, flora and fauna, land and water and supernatural forces, opens-up an opportunity to include and fuse knowledge systems. There is a whole system of thinking –a whole knowledge base, information base, science base out there that we haven't even begun to talk about because we are so educated. We are so certain that we know our science – and our science is good, but is it applicable? So you have to find a way to take what these technical sciences at high level know, and also take what the less rigorous scientist know – and figure out how to put them together (Steven Worth). A system approach underscores the interdependence of external and internal elements to form a complex whole in a particular environment and is globally important, as so profoundly stated:

> I think we have discovered as a world that our headlong rush to technological innovation and industrialisation and all those things have led us to a point where we are seriously having to consider the death of our planet and the demise of the human race. Because we have stopped living in harmony with our plants, earth, wind, water and all of that. But if you look at all indigenous people – the foundation of their society was based on a harmonious relationship with the planet. If that kind of knowledge achieves the prominence it should have, at this time in which it is so necessary, it is something that will benefit the entire human race (Mary Peters).

Acknowledging the significant contribution of all knowledge system to sustain life on earth, paves the way to start fusing global knowledge systems in higher education.

5.3 Fusing Knowledge Systems

Strengthening indigenous knowledge in context of the internationalisation and decolonisation debates, requires a renewed or a change of mindset a change of our way of thinking before we can ever endeavour to go out there and change something (Mayashree Chinsamy). We firstly have to remove the false dichotomy between science and science – local science and professional science. Once I can recognise what you have to say is as valid as what I have to say – even though they come from different rigorous processes, then we can go places. Constantly going to tug-o-war about one of us is right and one is wrong results in nothing but sore arms, therefore we should pull in the same direction saying you have this strength and I have this strength, let's see how we put those together (Steven Worth).

Recognising that none of the knowledge resources are worth more than the others, initiates a fundamental transformation. In the local context it could even be possible that indigenous and local knowledge can have greater merit. But that is a conclusion to arrive at after a reasonable rational and logical analysis of all of

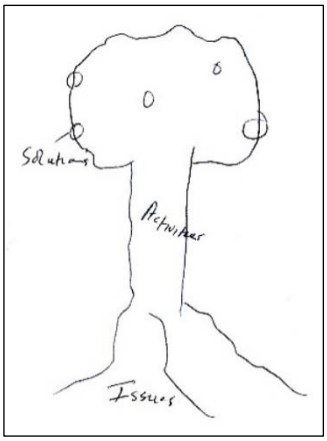
them, and to get there we need to go through a process of rediscovering our indigenous knowledge that become lost to us because of our history (Mary Peters).

Two methodologies to achieve this were advocated and to some extent implemented, namely:

1) Partnership and participation

In practice, the SEAD-SA partnership is based on first looking how people want to go forward, and keep in mind things like traditional leaders, communities, community based agriculture for example, and people want to work with that and take that as a base for development further (Jack Vera). We talk about participatory innovative development where you bring different sources of knowledge together to solve problems. The PROLINNOVA approach is to focus on what people are already doing to solve a problem and then build on that rather than starting off with an external solution and adapting it (Brigid Letty). We look at what our local partners want to do and achieve and we try to bring in our knowledge which should be helpful. So that is the way of dealing with things – partnering. It definitely not bringing Western knowledge and saying you have to use that in that way (Jack Vera).

Programmes, whether in education, food and nutrition, agriculture, etc. are hugely successful where people immersed themselves in the communities (Vinay Rajah). To apply participatory tools you have to understand the concept. You have to know why you are doing it, and explain it and integrate it into the work that communities are doing. You cannot just say 'Oh they participated – they gave us information'. What information do you give back? That is the whole point of participatory (Avi Sahadeva). You learn when you infuse yourself and become part of a community. If you just come in from the outside, people will tell you what they think you need to know. Whereas if you infuse or merge yourself and become part of that community, you can do an observation study (Mo Ngubane).



Participatory tools are very technical. We explain it to our students through a problem tree in which the roots are your issues - the root cause. For the tree to grow it receives nutrients through the trunk - those are the activities that you would do to bring a solution – which is your fruit (Avi Sahadeva).

2) Co-creation and collaborative learning

Through participation and community outreach projects, students become instrumental in co-creating new epistemologies. The way students' knowledge is developed today is an important aspect to reflect on. Lecturers must sensitise their students to learn from their experiences and move away from forcing information on their students. *Dat wanneer hulle by ons weg gaan en in 'n situasie beland, hulle die ding kan analyseer en weet dat hulle heeltyd iets moet byleer* (When students leave the institution they can analyse a situation and remain prepared to continue learning). Student must know where they can find the sources to consult (Johan van Veenendaal).

Feedback and collaborative learning is an important aspect to achieve this. In the agricultural extension programme we get the students to go into the field, and we really do not worry too much what they have done there – it's what they have learnt from having done that. So we teach them a framework - go try it and see what is the difference between what we told you and what you experienced. We want them to have the ability having done that to know how do I adjust this, or can I develop a new way of doing this? For me the whole idea of education is about life experience (Steven Worth).

How we try to do that is by having undergraduate programmes in Indigenous Knowledge Systems which gives us the history, nature and patterns and philosophy and research methodologies that go with that. We also try a new system to bring the knowledge holders into the classroom. When you get that first-hand account and understanding, there is no gap between your own personal lived experience to what you are learning in the classroom (Mayashree Chinsamy).

There are also instances where academics go into the field to research how to use indigenous knowledge to resolve problems in their local community - from medical research to social and hard sciences. A specific institution has, for example taken academics from the rest of the continent and said 'here's an issue, here are our natural herbs which *sangomas* are using to cure certain things. Why don't you go into scientific research of this and see how it adds up to a Western kind of medicine?' (Vinay Rajah).

The methodology you choose depends on the context you are working in. If I am preparing my students in an academic environment, we have to emphasise that scientific knowledge is important because the output that comes with it that is needed by the universities. Where if you are looking at them to go into the communities and implement what they have learnt as extension officers or researchers – an agent that can make a change, then you would use your participatory tools for them to understand why they are doing certain things, and that is where the indigenous and local knowledge comes in (Avi Sahadeva).

If you look at the question of internationalisation , you have to put it into four quadrants. You have the local lens, the regional lens, the continental lens and the global lens, and you cannot have the one taking importance over the other (Vinay Rajah). The important point is that while you are exposed to knowledge from around the world, you are also exposed to knowledge that was developed, generated and structured in your own country and that you are able to put it all together. They all have equal merits and weighted equally, and you should be able to critically analyse all of them to reach the kind of solutions that you want for where you find yourself (Mary Peters). What makes a person complete? Physically, emotionally, mentally and spiritually – those are the kind of knowledge we should talk about in internationalisation of education. We should promote the internationalisation of knowledge systems, including indigenous knowledge – community based knowledge systems in a poli-epistemic world - a world composed of different cultures and knowledge systems. (Hassan Kaya).

The one thing to consider when an international of foreign organisation comes into a country, is that you do not come with all the answers, you come with a part of the puzzle which may be the part that can finish the puzzle, but it's not all the pieces. You have to be mindful and engage with the locals to make sure that you build the same puzzle and that you are not coming with a square and knocking it into a triangle (Huba Boshoff). A mutual exchange of knowledge whereby everybody in the education industry learns from each other is very important. Countries or institutions cannot engage with one another, and one party walks away without anything changed. That is a very transactional way of looking at internationalisation, and that underlines the idea that there is only one way of doing it and there is only one knowledge system. Whereas if we think of internationalisation in a transformational way and use it to look at the knowledge from a different country, sharing and going back in a different format then we are making progress to understand one another and develop new ways of thinking and new knowledge (Huba Boshoff). Collaboration is more than just the sum of its parts, as this experience demonstrates:

> We brought two students from Netherlands into a programme in the Western Cape for two days. They went to school for one day and joined the students in the field in the Cape flats for one day. I asked them before what their expectations were, and they thought they can bring a lot knowledge. Afterwards I asked them if their expectations come true and they both said 'No, not at all. We have seen that people are knowledgeable. It's not so much about us being able to spread knowledge here. People are working in very different situations, a very different environment. Actually we learnt a lot, and now we can see what we can still add (Jack Vera).

There is great value in saying we can sit in four different corners of the world, and we each bring something to the table. Mine isn't worth 50 and yours 20, we equally bring something. To share that knowledge is really where that magic happens of understanding different systems, of understanding different values, of understanding different cultures and then saying 'Now I have a lens to look at my own country through your lens and see what it looks like and then reflect back what does it mean to me?' (Huba Boshoff). Achieving this requires acknowledging and embracing multiple epistemologies. If the global pool of

knowledge is to be rich, sustainable and relevant to all humanity there must be democracy of knowledge systems **(**Hassan Kaya). That's why I like your term fusing. Everything is going to take time, it's not something that can happen overnight. The two words: internationalisation and decolonisation - they are both important, but I like the fusing (Jade Bailey).

6. Conclusion

Growing human populations in the South who aspire to economic development, and aging populations in the North with high standards of living, has exceeded the earth's carrying capacity. The depletion of natural resources, environmental degradation, loss of biodiversity and climate change threatens human survival. This life threatening risk is placing the necessity to share all existing knowledge that can contribute to adapting to changing circumstances high on the education agenda, including bringing the value of indigenous knowledge of people who have always lived in harmony with nature to the fore.

Concurrently the technological advances that evolved in the mid-twentieth century have disrupted conventional systems of human activity in every aspect. Neoliberal globalisation opened up world economies and increased trade between nations, and politically stable and economically strong countries benefit the most. Simultaneously the exponential growth of knowledge and online access to information has created knowledge societies in the North, while the South is still battling to transform its legacy of colonialism.

Nearly three decades after South African higher education embarked on the journey towards transformation, (i) racially separated institutions were merged and reorganised, but student enrolment and pass rates still do not represent the country's demographics, (ii) the education industry has emerged from isolation but is struggling to position itself in the globalised knowledge society, and (iii) systems were put in place to create equality and equity, but neither student integration, nor the inclusion of local content in the curricula has been fully achieved.

For South Africa to become an equal player in the global market, the education infrastructure has to become culturally-specific and address the country's own needs first. This requires radical changes in the syllabi, curricula and didactics, with substantial consideration of local relevance. The aim of this study was twofold; firstly to determine the extent to which South African higher education academics support the inclusion of 'less authoritative sources of knowledge' in their curricula, and secondly to determine to what degree this is realised in practice.

6.1 Challenges Expressed by Research Participants

Qualitative insights and information collected through in-depth conversations indicate that lecturers are aware of the internationalisation/decolonisation dichotomy, consider inclusion of indigenous knowledge systems and practices in their curricula, and reflect on local needs and realities. What clearly stood out is that while all participants acknowledge these realities, they feel they are entering unchartered waters, and expressed the following challenges.

1) Indigenous and local knowledge is not verified nor readily available

The lack of scientific rigour and undocumented nature of indigenous knowledge are two significant barriers lecturers are confronted with. The knowledge they are expected to transfer in higher education must be based on empirically verifiable facts, and they cannot accommodate unconfirmed and undocumented knowledge in their curriculum. This study has shown that whilst teaching staff acknowledge the necessity to incorporate local and indigenous knowledge, they do not know how or where to begin. Data firstly has to be collected, documented and validated.

Whilst some lecturers endeavour to do this, the holistic nature of indigenous knowledge and interwovenness of facts and beliefs remains a major obstacle. Indigenous knowledge cannot easily be categorised in Western academic disciplines, or studied without consideration of the socio-cultural context in which it is practiced.

They are also confronted by proponents of indigenous knowledge, who criticise the process of validation as holding indigenous knowledge accountable to Western scientific methods. And the rapid loss of indigenous knowledge, was also identified as a constraint, in their attempts. The quote 'In Africa, when an old man dies, it's a library burning' was used to illustrate the urgency of documenting remaining indigenous knowledge.

2) Indigenous knowledge is perceived as inferior

Perceptions that traditional knowledge is outdated and irrelevant in the modern world, equally restricts its inclusion in the curricula. Although none of the research participants made any value judgments about local and indigenous knowledge, many clearly stated that cultural myths, rites, rituals, and harmful practices cannot be supported in an academic environment.

Another restraint according to some participants, is that students are not interested in what they perceive as 'backward' knowledge, and expect that what they learn will initiate them in the global world. Students from traditional backgrounds often feel embarrassed, and are not prepared to publicly share their local understanding and practices. It was noted that the self-worth and self-respect of many students from marginalised communities has been 'seriously damaged'. One participant questioned 'how do you instil pride in a knowledge system that your students want to distantiate themselves from? Concluding that '…perhaps decolonisation entails more of a psychological activity than curriculum reform'.

3) Higher education's disconnection from local realities

The conflict between internationalisation and indigenisation or Africanisation of the curricula is an ongoing sensitive and emotional issue. Participants admitted that their students need to relate to the knowledge they receive, otherwise, as one participant declared; 'it's like knocking a square peg into a triangular hole.' Many recognised that although internationalisation reinforces a Eurocentric epistemology, it is based on scientifically proven fundamental truths, and thereby it is leading in higher education. They further argued that it is impossible to prepare their students to partake – or actually 'to compete' in a globalised world, if they do not offer nationally and internationally recognised qualifications.

Some participants expressed their concern regarding academia's disconnection from local, and specifically from disadvantaged communities. Even though practical work and internships are often part of the syllabi, it is challenging to deploy students in remote rural areas. Where this can be done it is usually with a focus on community outreach, to 'uplift' poor communities. One participant mentioned that as lecturers they expect students to learn from these activities, but the question remains whether the insights of students are shared in class or documented in academic journals.

The pressure on students to perform in adherence to global standards, whilst feeling alienated from their own environment is expressed through the ongoing demand for decolonisation that higher education institutions are confronted with.

4) Lack of clarity on what decolonisation of the curriculum entails

It appears that participants attach different meanings to the notion of a decolonised curriculum. Individual lecturers are academic subject specialists, with little understanding of how to fuse global knowledge with African philosophies. There is some experimentation done through using local examples in their teaching, but they feel it is a lonely and daunting task in which they are not experienced, skilled, acknowledged or supported.

The greatest challenge that they are confronted with is their institutions' transformation policies that requires of them to develop human capital on par with international standards and the national development agenda, whilst decolonising simultaneously, which is perceived to be an impossible task.

5) Conflicting legislation

The post-apartheid regulatory transformation policies present frameworks for structural and ideological change, but do not address the 'epistemic violence' warned against in the 2010 HESA report. Although higher education institutions have paid attention to transforming institutional and physical settings, and have increased the number of black academic teaching staff as well as former disadvantaged students' enrolment and graduation rates, it was not until the aftermath of the 2015 #Rhodes must Fall protests that the demand to decolonise the curriculum came into the spotlight. None of the research participants admitted to having personally experienced any resistance from their students, but they are all acutely aware of the demand that the South African education system must decolonise.

Participants do however feel that national legislation is conflicting, and many of them mentioned that fusing local and indigenous knowledge in their current curriculum is not supported by the regulatory frameworks. During the SEAD-SA kick-off workshop, one of the research participant stressed that 'in spite of local needs, we have to look at the end goal. The certification process determines our interventions.' It was also clearly stated by other participants that the 'walk and talk' of different ministries is contradictory.

6) The digital divide

Although continuously improving, the average South African student's possession of state-of-the-art technological gadgets and access to the Internet is hampered by financial constraints and the regular unavailability of power. It is part of a political battlefield embedded in a broader discourse, but the fact was acknowledged by all participants that ICT is one of the most important drivers of educational change.

They individually stressed that artificial intelligence and accompanying technologies that blur the division between the physical, biological and technical spheres; the Fourth Industrial Revolution (4IR) – in which we are already living, will disrupt labour markets and create even greater inequality. To prepare their students for the future, instructional modalities that promote the application of 21st century learning skill, such as collaboration, critical thinking, and creativity should be included in curriculum design. This new environment requires adaptive learning models, and contextualised learning content infused with local knowledge.

According to the study participants, their greatest challenge is that students are embarking upon higher education without any prior experience of using available technology or applying 21st century learning skills in their studies. This is a double-edged sword, as ICT offers tremendous opportunities to share, gather and contextualise relevant local knowledge, but students have to be skilled in critical, independent and collaborative learning skills.

6.2 Opportunities and Concluding Remarks

Technology offers tremendous opportunities to contextualise and decolonise education and co-create an integrated understanding of reality. Through communication networks and online collaboration, ICT has shifted learning from memorising facts to exploring factors that underpin human interaction and knowledge environments. For example, Communities of Practice (CoP) are online groups of like-minded people who collectively share and develop innovative worldviews. It is a powerful space designed to enrich respectful, engaging, and inspiring learning experiences that critically explores the contribution of indigenous, local, and global knowledge systems.

Participatory Action Research (PAR) is a form of collaborative collecting of information that combines theory and practice in search of practical solutions to issues. PAR is based on the assumption that knowledge is a social construct rooted in the experiences and lives of individuals. This critical, democratic and transformative research approach intends to lead to action and involves community members or community-based organisations as research participants, but it can also be used in the learning environment to collect and record students' memories and experiences of practices they are familiar with. This type of collaboration lessens the traditional knowledge hierarchy and allows all participants to reflect

upon each other's thinking and become "jointly educated" (Freire 2005: 109). Service-learning is another active teaching, learning and research strategy that requires of students to apply their academic knowledge through community service. Students share what they have learnt with a community, and provide feedback about the knowledge they have gained, which is incorporated into the existing pool of knowledge.

If a curricula-based approach to CoPs, PAR and service learning were well designed and implemented, it could lead to academically rigorous and meaningful strategies to gather and evaluate local and indigenous knowledge. The three strategies benefit all stakeholders; students share their time and intellectual knowledge whilst gaining an understanding of the academic contents' relevance to local issues, lecturing becomes more rewarding because of student engagement and their insights can be incorporated into research and the curriculum, and communities are given a voice, whilst their knowledge is recognised in academic circles. Intellectual property rights and biopiracy are ethical matters that have to be carefully monitored in these situations.

Although DHET policies promote South Africa's integration into the global world, and public higher education institutions' strategic plans only tend to focus on institutional and ideological transformation, they are both intensely concerned with transformation from colonial injustices. Various South African ministries, including DST offer internships for student to acquire practical experience in local communities. The value attached to and funding made available by the NRF (2014) to 'knowledge fields development' should serve as a point of departure. The DST Indigenous Knowledge Systems policy clearly affirms the South African government's commitment to mainstream indigenous knowledge in education. DST has established indigenous knowledge centres at universities, "dedicated to facilitating collaboration between tertiary institutions, NGOs and IK holders and practitioners working in development and promotion of IKS" (DST 2004: 35).

Furthermore, the generic CCFOs in all SAQA accredited qualifications oblige lecturers to develop and assess students' holistic and critical thinking abilities. For example, the last outcome: *Demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation*, is an ideal opportunity to explore different knowledge systems in all SAQA accredited qualifications.

It is a given that Western knowledge systems have been favoured at the cost of the rich intellectual knowledge and cultural wisdoms of African and other indigenous civilisations. Nearly all research participants propagated a balanced approach that values both international and local knowledge. Acknowledging the value of indigenous and local knowledge systems in sustainable development, strengthens and enriches the universal knowledge pool, not only in South Africa and Africa, but also globally. As centres of academic excellence, higher education institutions should represent multiple domains and types of knowledge, even with opposing logics and epistemologies. Sustainable development which safeguards human existence can only be developed if higher education can overcome the dichotomy between indigenous or traditional and Western scientific knowledge.

This requires a paradigm shift, which starts with raising consciousness and awareness of the power of knowledge that depends on the interests and purposes for which it is harnessed. Foucault's 'regimes of truth' serves as a warning to universities about being hegemonic epistemological power houses, at the cost of disadvantaged and disenfranchised communities. This is especially true when attempting to capture seemingly conflicting perceptions of truth, reality and science to address wicked problems in a complex world. As challenging as it is, decolonising education in South Africa is certainly a starting point to challenge ruling neo-colonial global power structures.

One way to contribute to the successful integration of seemingly opposing approaches to knowledge is through creating a better understanding of the holistic nature of indigenous knowledge. There is a growing awareness in Western sciences that the complex and wicked problems, which humanity is confronted with

cannot be solved though reductionist and positivist thinking. Systems thinking is an emerging approach that acknowledges the interaction between different parts, rather than studying specific components of a system in isolation. This paradigm shift leads to Western academia gradually adopting interdisciplinary frameworks to understand the interconnectedness between all diverse elements in the world. Systems thinking overlaps with traditional holistic worldviews, and provides a sound platform to adapt postulated Western theories with local practices. The inherent holistic approach of indigenous peoples to their dynamic social realities are perfect examples of functioning inter- and even transdisciplinary knowledge. – which enriches our collective knowledge of the world. Traditional knowledge includes essential aspects of science, such as empirical observation and rigorous testing. As proposed by one of the research participants, categorising indigenous knowledge in local memory, local practice and local science, enable researchers and scholars to look objectively at different practices and methods while honouring the cultural heritage aspects thereof.

History and language undoubtedly shape collective identity. In this people need an understanding of where they come from, where they are, and where they are going to. Kenyan born Ngugi wa Thiong'o is one of the most renowned advocates of promoting African languages to empower people on the African continent and decolonise their minds. Given that most indigenous societies do not have a literary heritage, the importance of spoken language in research cannot be overemphasised. The language issue is a sensitive and controversial matter that according to the CHE "has added to the instability of the social justice project in teaching and learning in higher education" (2016:173). The crucial importance of indigenous language in education was not been touched upon at all in this study. It is such a critical and complex aspect that it justifies a space on its own.

Ground-breaking research and documentation is being done by the Centre for Indigenous Knowledge Systems (CIKS) at the UKZN, in partnership with DST and the NRF, and together with the Universities of North-West, Limpopo, Venda and South Africa (UNISA). The commitment of DST-NRF CIKS to mainstream indigenous knowledge in academia and sustainable development approaches, creates a forum where students and lecturers can network to strengthen indigenous knowledge, and could serve as a focal point to aggregate the collected data. It provides an opportunity for fusing knowledge systems embedded in African spiritual cosmology and philosophy, removing the uneasy alliance between international and indigenous knowledge, and the need for one to be seen as more scientifically or inherently better than the other. In support of transformation of South African education, the Continuing Professional Teacher Development (CPTD) policy awards points to educators for embracing lifelong-learning principals and taking charge of their own occupational self-development. CIKS has proposed to develop an online course that fits into the CPTD higher education framework, to capacitise lecturers in democratising knowledge systems. It is in the planning to co-create this course in collaboration with their partners, and in conjunction with African Studies Centre Leiden University, Voice4Thought and Nuffic in The Netherands.

Creating culturally specific learning environments, and constructing the acquisition of new knowledge upon students' prior knowledge and experience is not only pedagogically sound, it also builds self-confidence. In the words of Steve Biko: "[I]n our minds, souls and hearts, these are the things we desire deeply to change. We want the African child to be born with a love and admiration for his/her heritage and to identify first with what (s)he is, namely: African" (1987: 29).

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Annex A: Participants

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Annex B: Consent Form

Consent to Participate in Research

Universiteit Leiden
African Studies Centre

I invite you to take part in my research study in completion of a MA African Studies through the University of Leiden, in which I explore the necessity and ways to fuse Western and Local Knowledge Systems in the context of the prevailing internationalisation and decolonialisation debates.

Terms of Agreement

I agree to participate knowing that I can withdraw at any time or refuse to answer any question without any consequences of any kind.

I have been informed about the purpose and nature of the research and have had the opportunity to ask questions about the study.

I am further aware that:

- I can withdraw permission to use data from my interview within two weeks after the interview, in which case the material will be deleted.
- I will not benefit directly from participating in this research.
- My interview will be audio and video-recorded and retained for five years from the date the exam board confirms the results of the research dissertation.
- Under the South African Promotion of Access to Information Act 2 of 2000 I am entitled to access the information I have provided at any time while it is in storage as specified above.
- All information I provide will be treated confidentially, but consent to my identity being revealed with prior consent. Extracts from my interview may be quoted in the dissertation, including the Small Private Online Course (SPOC).
- I am free to contact the study supervisor Prof.dr. M.P.G.M. Mous from Leiden University Faculty Humanities m.mous@hum.leidenuniv.nl to seek further clarification and information.

Name of research participant	Name of researcher
Institution	Institution
Signature	Signature
Date	Date

Annex C: Conversation Guide

Fusing Western and Local Knowledge Systems in Context of the Prevailing Internationalisation and Decolonialisation Debates

"Every society has its own knowledge advantages and strengths. It is hence necessary to work towards connecting the forms of knowledge that societies already possess, including traditional knowledge, and new forms of development, acquisition and spread of knowledge valued by the knowledge economy model and supported by ICT"

UNESCO 2016 Knowledge Societies Policy Handbook Pg. 9

Loose structure of conversation

1. Personal introductions
2. Consent to participate in research study
3. Perceptions of different knowledge systems
4. Tensions experienced at institution or during lectures
5. Experience with incorporating local knowledge in an academic environment
6. What could be a model for fusing knowledge systems?

KNOWLEDGE IS POWER, but……..

Thank you!

Madi Ditmars

Student MA African Studies Leiden University

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