






A Quest for Decolonization: Incorporating Indigenous Pedagogies to Foster Teaching and Learning at Higher Education Institutions in South Africa

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ABSTRACT

Higher Education Institutions (HEIs') have been challenged by society that their teaching and learning (T&L) strategies fail to focus and dwell on the problems that are experienced by communities. This led universities to experiment with various pedagogical styles to foster and drive their core mission. The lack of realization and use of indigenous knowledge (IK) and pedagogies has also contributed to the negative image of these institutions as they are viewed as being detached from the realities of society and their knowledge systems. It is therefore imperative to introduce a different approach and strategies to advance T&L at these HEIs. This paper examined the role and value of IK in the 21st century and how this knowledge system can be applied and appropriated using its pedagogical stance to foster T&L in higher education institutions of South Africa. A qualitative document analysis was applied to pinpoint the relevance and value of these indigenous pedagogies in HEIs. This methodology also assisted in discovering development trends within the field of IK and T&L in South Africa. The paper revealed that IK is a social capital that needs to be harnessed to foster sustainable teaching and learning at HEIs. This IK should be propagated, developed, and enhanced for universities to achieve positive thruputs. It is concluded that indigenous philosophies, values, pedagogies, and methodologies play a significant role in driving the T&L missions of universities in South Africa. The study contributes to debates on the decolonization of knowledge, knowers and pedagogies in HEIs' thereby advancing scholarship.

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INTRODUCTION

South Africa's democratic dispensation has brought about new opportunities for people who have previously been marginalized and disadvantaged by the apartheid era. These opportunities have seen Africans now trying to rediscover their culture and tradition thereby advancing their value system. Mekoa points out that this realization and rediscovery by Africans is guaranteed by the country's

Constitution which enshrines the rights of people to freedom of consciousness, including academic freedom in South Africa's institutions of higher learning.¹

Higher education institutions in South Africa have long been dominated by ideologies that represent the history and purpose of these institutions and were intended to serve the political interests of the apartheid segregation.² This can be evidenced by the types of universities that were developed under the apartheid system. These were divided into three and are as follows; English universities, Afrikaans universities and the then-black tribalized universities. All these were equipped with Western ideologies and philosophies which were rooted in the divide-in-conquer approach. Therefore, the pedagogy applied by these universities was and still is Western inclined and not deemed appropriate for the former colonized as their ideologies are nowhere near their teaching and learning activities in these institutions.

The #FeesMustFall movement in South Africa which was experienced by the higher education sector in 2015 and 2016 served as a wake-up call for higher education institutions. This movement is viewed as the first of its kind since the dispensation of democracy. With #FeesMustFall, African students were calling for the decolonization of the university curriculum and demarketization of university education among others.³ This decolonial cause was not only focused on curriculum decolonization but also the overall decolonization of the university.⁴ This meant that universities needed to abandon their Western institutional culture thereby inculcating and mainstreaming indigenous pedagogies and indigenous knowledge in their teaching and learning missions.⁵ Decolonization in the higher education context means confronting and challenging the colonizing practices that have influenced education in the past, and which are still present today.

Indigenous Knowledge Systems (IKS) is defined by Odora-Hoppers as knowledge that is characterized by its embeddedness in the cultural web and history of a people, including their civilization, and it forms the backbone of the social, economic, scientific and technological identity of such a people.⁶ IKS reflects the environmental wisdom derived from the environment and developed over centuries. Different cultures develop, refine, and hybridize knowledge as they interact with their environment.⁷ Various scholars such as Molohe and Letseka argue that IKS was a vital requisite in Africa's development prior to colonization; however, this knowledge system was later undermined by the colonizers.⁸ One important area which served as a tool to undermine IKS was education. This can still be witnessed today as IKS is still tossed to the side and viewed as primitive by other knowledge systems and Western scholars.

The use and mainstreaming of IKS in the teaching and learning mission of higher education institutions mean that there would be an avenue to apply indigenous pedagogies that are rooted in indigenous philosophies, heritages, languages, and educational processes. Saurombe & Materechera argue that IKS presents higher education institutions with a world of theory and scientific knowledge

¹ I. Meko, "In Response to the Call for Decolonization of the Curriculum: Mapping a Way Forward for the North-West University," in *Re-Imagining Africa: Perspectives on African Culture, Education and Development*, 2017.

² I. Meko, "Re-Inventing an African University to Promote Development in Africa," in *The Battle for the Soul of South African Universities: Institutional Cultures, Racism and Ideologies*, 2018.

³ T. Saurombe, "Are Things Falling Apart in South African Higher Education Institutions? A Reflection on the Era of #FeesMustFall," in *In Re-Imagining Africa: Perspectives on African Culture, Education and Development*, 2017.

⁴ Sabelo Ndlovu-Gatsheni, "The Dynamics of Epistemological Decolonisation in the 21st Century: Towards Epistemic Freedom," *The Strategic Review for Southern Africa* 40, no. 1 (2018).

⁵ Meko, "Re-Inventing an African University to Promote Development in Africa."

⁶ C. Odora-Hoppers, *Indigenous Knowledge Systems and the Transformation of Academic Institutions in South Africa* (Pretoria: HSRC Unpublished Paper, 2000).

⁷ T. Saurombe and S.A. Materechera, "Policy and Curriculum Issues in Natural Sciences and Technology Education in South Africa: Challenges and Prospects for Enshrining Indigenous Knowledge for Effective Teaching and Meaningful Learning," in *In Re-Imagining Africa: Perspectives on African Culture, Education and Development*, 2017.

⁸ M. Molohe, "The Extend to Which Development Studies Curriculum Promotes African Indigenous Knowledge Systems at Selected South African Universities," in *Re-Imagining Africa: Perspectives on African Culture, Education and Development*, 2017; M. Letseka, "African Philosophy and Educational Discourse," in *African Voices in Education*, ed. P. Higgs et al. (Cape Town: Juta, 2000), 179–93.

which is prime, pristine, and unpolluted by unholy *isms*.⁹ Additionally, IKS offers helpful and previously marginalized cognizance for a better understanding of the world beyond Western European/Euro-American conceptual and knowledge boundaries.

Therefore, there is a need for HEIs to tap into the unique African experience and expertise of teaching. Tapping into the indigenous pedagogies to drive teaching and learning in HEIs will bring about the re-birth of knowledge co-creation thereby uplifting not only IKS as a living science but also the institutions' production of graduates and academics who are not oblivious to the issues facing communities thereby providing viable solutions. Saurombe & Materechera add that indigenous pedagogies will provide a different worldview to students and universities alike which will ensure that there is a provision of special plausible ideas, activities, and values.¹⁰ The purpose of the study is to contribute to the debates surrounding the decolonization of pedagogies and knowledge within the higher education sector. Furthermore, it is to add to the body of knowledge within the sphere of decolonization, education development and IKS.

METHODOLOGY

The paper applied a qualitative document analysis (QDA), focusing on scholarly published papers about indigenous knowledge systems, decolonization, indigenous pedagogies, and teaching and learning at higher education institutions. This study used secondary data obtained from existing literature, documents, and newsletters to investigate the role of indigenous pedagogies in fostering teaching and learning at higher education institutions in South Africa. This method provided background information as well as historical insight into how indigenous communities have applied their indigenous knowledge and systems to foster teaching and learning within their respective communities. This method helped in gaining insights into the historical root of pedagogy and decolonization of university teaching and learning, thereby providing the researchers with profound information about the phenomenon. Furthermore, it provided a means of tracking change and development on decolonization strategies afforded by universities using indigenous knowledge in South Africa.¹¹

Understanding Decolonization in the Context of Teaching and Learning at Higher Education Institutions

While decolonization has only unshackled colonial tentacles from political platforms and spaces of formerly colonized states, commerce, language, and education continue to transact after the manner of the colonizer.¹² It is therefore imperative that HEIs in South Africa reclaim their positions in the knowledge generation and practices sphere. This can be achieved by inculcating indigenous knowledge and pedagogies alike in their teaching and learning missions. This IK will serve as a foreground to teach unique African knowledge and reclaim the front-seat position in the knowledge economy.

Decolonization is not a new phenomenon to be discussed under the aspect of education, however, many scholars have failed to position decoloniality and education within the right stance and context. Understanding aspects of decolonization and what needs to be decolonized is very vital for a paper such as this one. The researchers position decolonization in this paper as the dismantling of colonial empires, philosophies, worldviews, languages, and epistemologies of the non-indigenous forces.¹³ At an institutional level (such as HEIs) it refers to not only moving away from Western

⁹ T. Saurombe and S.A. Materechera, "Tapping into the Unique African Experience of Teaching Indigenous Knowledge Science in Higher Education Institutions: A Re-Birth and Measure for Uplifting Indigenous Knowledge System as a Living Science," in *The Battle for the Soul of South African Universities: Institutional Cultures, Racism and Ideologies*, 2018.

¹⁰ Saurombe and Materechera, "Tapping into the Unique African Experience of Teaching Indigenous Knowledge Science in Higher Education Institutions: A Re-Birth and Measure for Uplifting Indigenous Knowledge System as a Living Science."

¹¹ Glenn A. Bowen, "Document Analysis as a Qualitative Research Method," *Qualitative Research Journal* 9, no. 2 (August 3, 2009): 27–40, <https://doi.org/10.3316/QRJ0902027>; Elise Wach, "Learning about Qualitative Document Analysis," *IDS Practice Papers*, 2013.

¹² Saurombe and Materechera, "Tapping into the Unique African Experience of Teaching Indigenous Knowledge Science in Higher Education Institutions: A Re-Birth and Measure for Uplifting Indigenous Knowledge System as a Living Science."

¹³ Meko, "In Response to the Call for Decolonization of the Curriculum: Mapping a Way Forward for the North-West University."

hegemony but rather infusing indigenous knowledge and decolonizing the minds of those who were formerly colonized, marginalized, and oppressed. Africans' values have always been marginalized in the education sector and this has resulted in the overall Westernization of education theory and practices in Africa broadly and South Africa in particular.¹⁴ Hence the need to position decoloniality within the higher education sphere.

Scholars such as Makgoba pinpoint that a university in Africa should recognize its responsibility to enhance Africa, its people, and its rich and diverse values, traditions, and heritage.¹⁵ However, this has not been achieved and remains a huge challenge for educationists in South Africa today.

Incorporating Indigenous Pedagogies in Teaching and Learning at South African Universities

Indigenous pedagogies are defined as a method of teaching that merges aboriginal stories as a guiding tool towards knowledge, depending on the relationship between nature and people with a holistic interconnectedness.¹⁶ Indigenous pedagogies play a crucial role in promoting learning through intergenerational, experiential, and place-based learning as well as personal and holistic.¹⁷ Madden, articulates that the basics of indigenous pedagogies are; mutual learning between a student and a lecturer, respect and recognition of their various experiences that brought them into teaching and learning. Indigenous pedagogies further promote a holistic learning environment through land-based teaching, stories, and oral traditions.¹⁸

Indigenous pedagogies must be incorporated into teaching and learning at South African Universities because it is a good way to link courses with culture. As a result, students will be able to know that their culture is represented thoughtfully across teaching and learning environments. The indigenous pedagogies allow students to learn through action, observation, and reflection. Indigenous pedagogies of the indigenous peoples have produced skills and capacities that have assisted students for many years.¹⁹ Incorporating indigenous pedagogies in teaching and learning enhances the recognition of the social identity of students, changing teaching and learning into a positive experience, thereby ensuring a better attitude of students towards indigenous knowledge.²⁰

Indigenous knowledge of teaching and learning in South African Universities continues to play a significant role for students as this knowledge is derived from the living experiences of students and lecturers. Additionally, including indigenous pedagogies in the curriculum can motivate students in a way that acknowledgement is given to their ways of living in their communities. Lambe elaborates that incorporating indigenous pedagogies in teaching and learning enables students and lecturers to have cognitive and innovative thinking.²¹ Students are given a chance to gain an understanding from their personal experiences as well as the knowledge that they have already gained from their homes. Through the incorporation of indigenous knowledge and pedagogies, students will have an opportunity to compare different types of knowledge for their societies and for their improvement as well.²²

¹⁴ Meko, "In Response to the Call for Decolonization of the Curriculum: Mapping a Way Forward for the North-West University."

¹⁵ Mahmood Mamdani, "Makgoba: Victim of the 'Racialised Power' Entrenched at Wits," 1997.

¹⁶ Kevin Slivka, "A Review Essay of Transforming Our Practices: Indigenous Art, Pedagogies, and Philosophies," *Studies in Art Education* 59, no. 3 (2018): 256–60.

¹⁷ Soenke Biermann and Marcelle Townsend-Cross, "Indigenous Pedagogy as a Force for Change," *The Australian Journal of Indigenous Education* 37, no. S1 (2008): 146–54.

¹⁸ Brooke Madden, "Pedagogical Pathways for Indigenous Education with/in Teacher Education," *Teaching and Teacher Education* 51 (2015): 1–15.

¹⁹ Leketi Makalela, "6 Teaching Indigenous African Languages to Speakers of Other African Languages: The Effects of Translanguaging for Multilingual Development," *Multilingual Universities in South Africa: Reflecting Society in Higher Education* 97 (2014): 88–104.

²⁰ Elizabeth Ann Rahman and Thandeka Cochrane, "Pedagogy and Indigenous Knowing and Learning," *Oxford Review of Education* (Taylor & Francis, 2023).

²¹ Jeff Lambe, "Indigenous Education, Mainstream Education, and Native Studies: Some Considerations When Incorporating Indigenous Pedagogy into Native Studies," *American Indian Quarterly*, 2003, 308–24.

²² Hassan O Kaya and Yonah N Seleti, "African Indigenous Knowledge Systems and Relevance of Higher Education in South Africa," *International Education Journal: Comparative Perspectives* 12, no. 1 (2013).

Van Wyk pointed out that having indigenous pedagogies as part of teaching and learning serves a crucial role by providing students with effective and relevant education based on their unique viewpoints, daily experiences, customs, and language.²³ Higgs and Van Niekerk further stated that it allows students to learn by doing, as well as learning how to effectively participate in their various institutions.²⁴ It is significant to preserve indigenous pedagogies, ensuring that they are not lost, and they are valuable for the decolonization of the curriculum. Furthermore, indigenous knowledge and pedagogies promote the role of communities and families in the education of students at various levels.²⁵

The use of indigenous pedagogies in teaching and learning should not only be prioritized or incorporated by a few universities in South Africa. However, all higher education institutions must implement the use of indigenous pedagogies in the existing curriculum.

Fusing indigenous pedagogies in teaching and learning at South African universities enables students who are not self-centered, and willing to be innovative and constructive. In addition to this, students are allowed to abstract comprehension from personal daily experiences, what they know from their indigenous communities, and their understanding of their local conditions.²⁶

The incorporation of indigenous pedagogies generates and motivates interest in students. Fusing indigenous pedagogies in teaching and learning at South African universities can motivate and encourage the interests as well as intellectual fortunes of the students since IK arises directly from what they experience in their daily lives.²⁷ Indigenous pedagogies help in promoting reciprocal obligations and interpersonal relationships. It integrates intellectual training, character building, physical education, and manual activities. Indigenous knowledge and pedagogies deserve full recognition in teaching and learning, especially in higher education institutions in South Africa.

The Role of Indigenous Knowledge Systems in the 21st Century's Teaching and Learning Missions

By its nature, IKS is intra, inter, trans and multidisciplinary. It is a holistic knowledge system that is created and transmitted through the generations within indigenous communities.²⁸ It is frequently based on observation, experience, and a profound comprehension of nature.²⁹ This knowledge system is also referred to as a complex set of developed skills, technologies, and knowledge. It occurs under specific conditions of communities and people who are indigenous to a specific area or location.

Mainstreaming IKS into the T&L mission of higher education institutions will enhance grassroots through folktales used as part of teaching. The language and symbols used in such folktales can enhance the level of understanding of various indigenous students and non-indigenous students. As a major role player in T&L, IKS supports and accommodates students and learners from various ethnic backgrounds to honour and preserve their cultural heritages thereby applying such a knowledge system in solving modern-day challenges that exist in society.³⁰ This knowledge system plays a vital

²³ Jerome-Alexander Van Wyk, "Indigenous Knowledge Systems: Implications for Natural Science and Technology Teaching and Learning," *South African Journal of Education* 22, no. 4 (2002): 305–12.

²⁴ P Higgs and M P Van Niekerk, "The Programme for Indigenous Knowledge Systems (IKS) and Higher Educational Discourse in South Africa: A Critical Reflection: Perspectives on Higher Education," *South African Journal of Higher Education* 16, no. 3 (2002): 38–49.

²⁵ Petrus M Mahlangu and Tendayi C Garutsa, "A Transdisciplinary Approach and Indigenous Knowledge as Transformative Tools in Pedagogical Design: The Case of the Centre for Transdisciplinary Studies, University of Fort Hare," *Africa Education Review* 16, no. 5 (2019): 60–69.

²⁶ Nadaraj Govender and Edson Mudzamiri, "Incorporating Indigenous Artefacts in Developing an Integrated Indigenous-Pedagogical Model in High School Physics Curriculum: Views of Elders, Teachers and Learners," *Cultural Studies of Science Education* 17, no. 3 (2022): 827–50.

²⁷ Catherine A Odora Hoppers, "Indigenous Knowledge Systems and Academic Institutions in South Africa," *Perspectives in Education* 19, no. 1 (2001): 73–86.

²⁸ Ray Barnhardt and Angayuqaq Oscar Kawagley, "Indigenous Knowledge Systems and Alaska Native Ways of Knowing," *Anthropology & Education Quarterly* 36, no. 1 (2005): 8–23.

²⁹ Donna Green and Gleb Raygorodetsky, "Indigenous Knowledge of a Changing Climate," *Climatic Change* 100, no. 2 (2010): 239.

³⁰ Dale L Taylor and Ann Cameron, "Valuing IKS in Successive South African Physical Sciences Curricula," *African Journal of Research in Mathematics, Science and Technology Education* 20, no. 2 (2016): 35–44.

role in producing people and graduates who can demonstrate cultural competency and achieve academically, as well as develop students who can critique and comprehend the existing social order. It is not only good for transforming knowledge-generating institutions but also for democratizing the formation of knowledge processes. IKS encourage learners and students to draw on their daily experiences and cultural practices as they negotiate unfamiliar terrain and new situations.³¹

Indigenous knowledge systems in the 21st century of teaching and learning have become very important as they play a crucial role in preserving the cultural identity and heritage of students. It creates a space for learning about nature and daily experiences. Furthermore, it affords students and teachers a sense of belonging and a sense of identity because of specific cultural practices.³² Understanding culture and tradition is very important for students. Knowing who they are and their roots as well. Therefore, it is vital to integrate and mainstream IKS with Western knowledge systems, thereby making sure that both knowledge systems complement each other and are utilized to enhance T&L in the 21st century. The reason behind this is that the majority of educational institutions and schools use Western knowledge systems as compared to indigenous knowledge systems.³³

IKS should not be seen as an old-fashioned form of knowledge, but as a knowledge system that promotes holistic learning and harnesses interdisciplinary perspectives. It allows students and learners to be taught in their own indigenous languages, ensuring the application, preservation, and transmission of IK in teaching and learning.³⁴ Students must be given a chance to confront their community knowledge in a positive sense. Moreover, IKS enhances innovative thinking in teaching and learning, as it gives out problem-solving strategies for indigenous communities.³⁵

In terms of evaluating the effectiveness of IK and conventional science, IK provides an intangible heritage which allows students to deal with practices and beliefs in real life.³⁶ Another affordance of IKS in teaching and learning is to provide students with a chance to differentiate and make similarities in various forms of their knowledge and knowledge of the society that they live in. Indigenous knowledge systems empower students better to make their decisions carefully, cut off chains of imperial domination and chart their destiny based on what they are being taught at schools or universities and in their homes.³⁷

The fundamental role of IKS is that it introduces a sense of cultural identity and self-consciousness. It is also utilized to reclaim dignity and humanity, teach language, and recount history. Teaching and learning should be rooted in cultural values and heritage, preserving culture, building self-esteem, and improving the identity and literacy output of the indigenous peoples. Indigenous games assist students and learners not only to be morally sensitive, innovative, be creative but also to be thankful for the forebear's indigenous epistemologies and creative genius in games, language, and physical education. IKS play a major role in promoting the dissemination of indigenous knowledge through teaching and learning across cultures. For instance, students from various cultural backgrounds will be engaging and sharing indigenous knowledge with other students from other cultures.³⁸

³¹ Piet Ankiewicz, "The Relevance of Indigenous Technology Knowledge Systems (ITKS) for the 21st Century Classroom," in *PATT 32 Conference Proceedings*, 2016, 22–34.

³² Ray Barnhardt and Angayuq Oscar Kawagley, "Indigenous Knowledge Systems and Education," *Teachers College Record* 110, no. 13 (2008): 223–41.

³³ Yonah Ngalaba Seleti, "The Value of IKS in Higher Education in the 21 St Century," *Transdisciplinary E-Journal (TEJ)*, 2014, 106.

³⁴ Emilia Afonso Nhalevilo, "Rethinking the History of Inclusion of IKS in School Curricula: Endeavoring to Legitimate the Subject.," *International Journal of Science & Mathematics Education* 11, no. 1 (2013).

³⁵ Nhlanhla Mkhize and Nobuhle Ndimande-Hlongwa, "African Languages, Indigenous Knowledge Systems (IKS), and the Transformation of the Humanities and Social Sciences in Higher Education," *Alternation* 21, no. 2 (2014): 10–37.

³⁶ Ellen Carm, "Inclusion of Indigenous Knowledge System (IKS)–A Precondition for Sustainable Development and an Integral Part of Environmental Studies," *Journal of Education and Research* 4, no. 1 (2014): 58–76.

³⁷ Munyaradzi Mawere, "Indigenous Knowledge and Public Education in Sub-Saharan Africa," *Africa Spectrum* 50, no. 2 (2015): 57–71.

³⁸ Maren Seehawer and Anders Breidlid, "Dialogue between Epistemologies as Quality Education. Integrating Knowledges in Sub-Saharan African Classrooms to Foster Sustainability Learning and Contextually Relevant Education," *Social Sciences & Humanities Open* 4, no. 1 (2021): 100200.

Worldview, Philosophies, and Ethics of Applying Indigenous Pedagogies in Universities

Education planners in Africa tend to often favor Western-orientated curricula, worldviews, pedagogies, and philosophies that are rooted in Western thinking.³⁹ Evidently, African ways of knowing have been criticized, unvalued, and not mainstreamed in the curriculum planning of Africa's modern-day education system. It is against this backdrop that the paper argues that the relevant use and application of an Africanized worldview and African philosophies can enable HEIs to foster meaningful teaching and learning embedded in an African ontological system.

A worldview is defined herein as one's fundamental collection of beliefs about the world.⁴⁰ It is an ontological assumption or basis to which one views the world and how he or she chooses to apply his or her ontology to shaping their future. A worldview is not merely about a collection of values and beliefs, but rather about one's view and experiences of life. This therefore illustrates that the ways of knowing indigenous communities and their being can enrich and contribute immensely to the science missions of HEIs and contribute to education in general.

An African worldview gives shape to an African philosophy and epistemological stance. The humanness of Africans enshrined in the ubuntu philosophy unearths the foundations for a community-centered approach to education. Ubuntu can be viewed as both a philosophy and a pedagogical approach which encompasses African morals and ethics. As articulated by Ngubane and Makua, ubuntu is an African way of life.⁴¹ It is a practice deeply rooted in kinship culture of collective solidarity. This philosophy is echoed and enshrined in one's ability to show kindness, compassion, care, and generosity to others.

Applying ubuntu in an education context, especially in HEIs of South Africa means that these institutions would need to establish an avenue in their T&L Missions and agendas to accommodate and promote coexistence of epistemologies. This means that their teaching and learning endeavors would need to be more inclusive of the communities in which these institutions exist and foster social cohesion and social justice. Ubuntu as a pedagogy and philosophy of life in an African sense means that the way education activities are undertaken and how learning takes place promotes co-learning and co-promotion of knowledge which enhances the quality of education seed planted in students.⁴²

Interestingly, the ethics that are enshrined in an African worldview and the philosophy of ubuntu shape the teaching and learning activities of HEIs. By applying both an Afrocentric worldview and the principle of humanity enshrined in Ubuntu, HEIs can be able to offer a more humanistic approach to T&L. In its simple sense, ubuntu means a person is a person through other people. In its original IsiZulu maxim "umuntu ungumuntu ngabantu".⁴³ This depicts that one is simply not complete without the other. In this instance, the Eurocentric education paradigms may not be able to bring forth tangible solutions to problems facing indigenous communities on their own. Therefore, to achieve relevant sustainable development within communities and with the basis of education, there must be harmonization of the Eurocentric paradigm and the indigenous paradigm. Indigenization of the education system and enshrining IK and ubuntu within the educational development endeavours, including T&L as well as research and innovation would benefit HEIs of South Africa. Hence, the essence of Ubuntu pedagogy lies in the recognition of equal partnership between the teachers and students as co-creators of knowledge.

³⁹ Samson Nashon, David Anderson, and Handel Wright, "African Ways of Knowing, Worldviews and Pedagogy," *Journal of Contemporary Issues in Education* 2, no. 2 (2007).

⁴⁰ Michael R Matthews, "Science, Worldviews and Education: An Introduction," *Science & Education* 18 (2009): 641–66.

⁴¹ Nomlaungelo Ngubane and Manyane Makua, "Ubuntu Pedagogy—Transforming Educational Practices in South Africa through an African Philosophy: From Theory to Practice," *Inkanyiso: Journal of Humanities and Social Sciences* 13, no. 1 (2021): 1–12.

⁴² Ngubane and Makua, "Ubuntu Pedagogy—Transforming Educational Practices in South Africa through an African Philosophy: From Theory to Practice."

⁴³ Moeketsi Letseka, "African Philosophy and Educational Discourse," *African Voices in Education* 23, no. 2 (2000): 179–93; Nathan Balasubramanian and Brent G Wilson, "Learning by Design: Teachers and Students as Co-Creators of Knowledge," *Educational Technology: Opportunities and Challenges, Oulu, Finland: University of Oulu* 30 (2007): 51; Ngubane and Makua, "Ubuntu Pedagogy—Transforming Educational Practices in South Africa through an African Philosophy: From Theory to Practice." ..

Relevance of Indigenous Methodologies in South African Universities

The understandings and abilities that have been acquired by communities over a long period and passed down from one generation to the next are referred to as indigenous knowledge. This does not imply that it is not dynamic; it is altered in reaction to social change. Indigenous knowledge is ingrained in a worldview that refers to as "non-rational presuppositions on which perceptions of reality are built. Stories may reveal a researcher's fundamental mindset.⁴⁴ Within indigenous knowledge is embedded the traditions, cultures, social norms, and values of different indigenous communities that have been developed through social and personal experiences which have played a significant role in how these communities understand and view the world they live in.

Over the years as indigenous knowledge continued to receive recognition and momentum in different sectors, many scholars developed interest in building different research paradigms and methodologies that would accommodate indigenous knowledge in academic institutions. Indigenous knowledge has been viewed as primitive, old and stagnant by different scholars who have viewed it using the Western lens of understanding knowledge which caused the marginalization of indigenous knowledge in institutions of higher institutions and educational systems. Scholars have argued that recognizing how neglected and endangered indigenous knowledge frequently serves as a catalyst for research into it, yet the research aimed at redressing the issues associated with the knowledge still uses the very same Western scientific perspectives to publish them.

A variety of measures are in place in South Africa to safeguard and advance indigenous knowledge. There have been a lot of seminars, conferences, research centres, projects, learning materials, and postgraduate courses in Southern Africa because of the growing interest in studying indigenous knowledge and science education. To the same extent as indigenous knowledge policy, publications, and interest organisations, research methodologies that are in line with indigenous knowledge systems have not yet advanced. Despite some authoritative literature,⁴⁵ indigenous knowledge researchers could use research-based examples from the Southern African environment to help them understand what an African research technique might include.⁴⁶

Interestingly, despite appeals for decolonized research approaches⁴⁷ and recommendations of what such procedures may look like in practise, IKS research is underutilized in South Africa.⁴⁸ Whether qualitative or quantitative research, IK research broadly, and especially in scientific education, stays conventional. Research is an enterprise that needs to be modified to include the very ways of knowing being explored, as it is submitted in scholarly journals and validated by peers in the academia.⁴⁹

Despite the passage of more than twenty years, it appears that there is still a need to comprehend what proper and alternative research approaches might entail in communities and in indigenous knowledge research in particular. Indigenous knowledge is founded on location, is holistic, and serves specific objectives that are directly related to survival rather than knowledge for knowledge's sake,

⁴⁴ William W Cobern, "Worldview Theory and Conceptual Change in Science Education," *Science Education* 80, no. 5 (1996): 579–610.

⁴⁵ B. Chilisa, *Indigenous Research Methodologies* (London, UK: SAGE, 2012); C A Odora-Hoppers, "The Cause, the Object, the Citizen: Rural School Learners in the Void of Intersecting Policies and Traditions of Thought," *Quarterly of Education and Training in South Africa* 11, no. 3 (2004): 17–22; L.T. Smith, "Decolonizing Methodologies," in *Research and Indigenous Peoples* (London: Zed Books Ltd, 1999).

⁴⁶ Constance Khupe and Moyra Keane, "Towards an African Education Research Methodology: Decolonising New Knowledge," *Educational Research for Social Change* 6, no. 1 (April 1, 2017): 25–37, <https://doi.org/10.17159/2221-4070/2017/v6i1a3>.

⁴⁷ Chilisa, *Indigenous Research Methodologies*; Queeneth Mkabela, "Using the Afrocentric Method in Researching Indigenous African Culture," *The Qualitative Report* 10, no. 1 (2005): 178–89; Smith, "Decolonizing Methodologies."

⁴⁸ M. Keane and C. Malcolm, "Participatory Research," in *Human Rights, Democracy, and Social Justice: Science and Mathematics Literacy in Disadvantaged Communities.*, ed. C. Malcolm (Durban, South Africa: : University of KwaZulu-Natal Press, 2004); Constance Khupe, "Language, Participation, and Indigenous Knowledge Systems Research in Mqatseni, South Africa," in *Handbook of Research on Theoretical Perspectives on Indigenous Knowledge Systems in Developing Countries* (IGI Global, 2017), 100–126; Bekisizwe S Ndimande, "Decolonizing Research in Postapartheid South Africa: The Politics of Methodology," *Qualitative Inquiry* 18, no. 3 (2012): 215–26.

⁴⁹ Khupe and Keane, "Towards an African Education Research Methodology: Decolonising New Knowledge."

according to studies conducted around the world.⁵⁰ Additionally, it should be highlighted in education research among indigenous populations that culture and language play a significant impact on learning, particularly among indigenous people.⁵¹

Wilson indicated that indigenous methodology is about relational accountability where researchers answer to their relations when doing research, the research goes beyond answering questions about reliability and validity or making judgements of better or worse.⁵² Wilson further argued that the methodology must ask different questions where the researchers must ask about their role in the relationship with the research and their obligation to the relationship.⁵³ When research is being conducted, morals and axiology must be an integral part of the methodology used in the research where the researcher must understand that research is not just about gaining knowledge or pursuit of abstracts but gaining the knowledge to fulfil their end of the research relationship by looking at the relational accountability or being accountable to all their relations. These aspects which the Western scientific perspectives of research do not offer thoroughly.

Methodology is simply the process by which research is conducted or ought to be conducted. Thus, methodology is a collection of strategies, procedures, guidelines, and precepts used in research. Indigenous methodology is a collection of theoretical and indigenous methodologies, procedures, guidelines, and tenets used by indigenous researchers to investigate indigenous peoples. The major goal of indigenous methodology is to make sure that research on indigenous topics can be conducted in a more considerate, moral, accurate, sympathetic, useful, and advantageous manner, seen from the perspective of indigenous peoples.⁵⁴

Researchers such as questioned the notion that Western knowledge about indigenous peoples was only for knowledge's sake where they cited the subtle purposes of control over the expropriation and territories of material and human resources.⁵⁵ Furthermore, Goduka et al. argued that for research to be relevant and improve the quality of life of indigenous participants, it must be rooted in indigenous worldviews, languages and worldviews because such aspects play a crucial role in the transmission and preservation of indigenous knowledge and researchers in indigenous knowledge spectrum must be mindful of these aspects so that they can appropriately align how they engage with communities so that they can be responsive and respectful to the sociocultural contexts of the communities.⁵⁶

According to Khupe and Keane indigenous methodologies propel researchers to respect and acknowledge key aspects that play a crucial part in indigenous knowledge research such as people, who are the participants in the research, where there must be an establishment of authentic and respectful connection and collaborations with the communities.⁵⁷ Participants are not viewed as objects to be studied but as active participants and knowledge holders in the research. The second aspect is the place, where sacred spaces, protocols and language of communication must be followed respectfully.

Researchers should make the participants aware of the expectations from them and the research itself, where there should be a clear understanding of the shared purposes and benefits of the research if there are any as well as frameworks that protect both the researcher and the participants. Ethics are the important aspects of indigenous methodologies, where values and principles of the communities are important so that they can protect the participants. They further provide protocols in terms of the consequences that will befall the researchers should they neglect their duties and obligations towards the protection and dissemination of the knowledge obtained from the research. Indigenous

⁵⁰ Pauline W U Chinn, "Decolonizing Methodologies and Indigenous Knowledge: The Role of Culture, Place and Personal Experience in Professional Development," *Journal of Research in Science Teaching* 44, no. 9 (2007): 1247–68.

⁵¹ Jerry Lipka, Monica Wong, and Dora Andrew-Ihrke, "Alaska Native Indigenous Knowledge: Opportunities for Learning Mathematics," *Mathematics Education Research Journal* 25 (2013): 129–50.

⁵² Shawn Wilson, "What Is an Indigenous Research Methodology?," *Canadian Journal of Native Education* 25, no. 2 (2001).

⁵³ Wilson, "What Is an Indigenous Research Methodology?"

⁵⁴ Jelena Porsanger, "An Essay About Indigenous Methodology," *Nordlit* 15 (2004): 105–20.

⁵⁵ Dani Wadada Nabudere, "Towards an Afrology of Knowledge Production and African Regeneration," *International Journal of African Renaissance Studies* 1, no. 1 (2006): 7–32.

⁵⁶ N Goduka et al., "Creating Spaces for EZiko Sipheka Sisophula Theoretical Framework for Teaching and Researching in Higher Education: A Philosophical Exposition," *Indilinga African Journal of Indigenous Knowledge Systems* 12, no. 1 (2013): 1–12.

⁵⁷ Khupe and Keane, "Towards an African Education Research Methodology: Decolonising New Knowledge."

methodologies in South African universities, mean decolonization of education. Since all research is inextricably linked to control and power indigenous scholars are now taking these issues seriously and incorporating them into the decolonization process, which entails granting indigenous peoples the right to self-determination not only from an economic or political standpoint but also with regard to research.⁵⁸ For indigenous peoples, this entails having the autonomy to choose their own research topic and methodology, free from outside interference.

Teaching Styles Afforded by Indigenous Knowledge Systems

Indigenous Knowledge Systems are the frameworks through which indigenous peoples are able to understand the world and recognize, value, disseminate, and apply knowledge in their daily activities. To respect the diversity of Indigenous nations, the phrase is purposefully written in the plural. Indigenous Knowledge Systems represent the distinctive experiences of each group while exhibiting common characteristics. They are typically built on place-based knowledge, oral traditions, and kinship.⁵⁹ Indigenous Knowledge Systems frequently encourage learning as a cooperative, holistic, experiential process that prioritizes relationality and the sustaining of the collective, in contrast to the more individualistic and competitive forms of learning prevalent in schools today. Education has traditionally aimed to promote the welfare of the whole child, including their emotional, mental, physical, and spiritual growth, for many Indigenous societies.

The goal of education was, and still is, to impart to future generations the knowledge and skills required to lead a balanced life, one in which people can use their special talents to improve the welfare of their relatives, which includes not only their immediate family but also the entire community as well as the wildlife, plants, waterways, and lands that are essential to life itself. Indigenous knowledge systems and educational practices place a strong emphasis on fostering connections between students and one another as well as with the broader community and the surroundings in which they spend their time. These approaches can teach all educators, whether or not they are Indigenous, how to firmly establish the social and geographic context of their instruction.⁶⁰

Indigenous Knowledge Systems are a core component of a people's social, economic, scientific, and technical identity and are distinguished by their integration into their cultural web, history, and civilisation.⁶¹ This non-essentialist technique to Indigenous Knowledge Systems exemplifies its diversity and inclusion, which will be built around learners' experiences and how they value the social and relational significance of identity.⁶² To preserve social, cultural, scientific, philosophical, and technological information, Indigenous Knowledge Systems aims to incorporate both the intangible and tangible parts that have trade value and can be transformed into businesses or industries.⁶³

Indigenous Knowledge Systems can play a more transformative role in how teachers or lecturers in South Africa, across all academic subjects, engage students in a style of knowledge construction in which they will comprehend themselves. This is in addition to its complementary and expansive role in terms of how students insert themselves into the course content, which is frequently being decided in advance. The idea of indigeness implicit in Indigenous Knowledge Systems aspires to be revolutionary in that it aims to be inclusive, particularly of those viewpoints that have historically been excluded from knowledge construction, to encompass the diversity of cultural, racial, ethnic, and religious practices of all people, and that will result in a positional acknowledgement of the students' social context.⁶⁴

⁵⁸ Lester-Irabinna Rigney, "Internationalization of an Indigenous Anticolonial Cultural Critique of Research Methodologies: A Guide to Indigenist Research Methodology and Its Principles," *Wicazo Sa Review* 14, no. 2 (1999): 109–21.

⁵⁹ H. Thomas, "Indigenous Knowledge Is Often Overlooked in Education. But It Has A Lot to Teach Us," 2022.

⁶⁰ Thomas, "Indigenous Knowledge Is Often Overlooked in Education. But It Has A Lot to Teach Us."

⁶¹ Odora-Hoppers, *Indigenous Knowledge Systems and the Transformation of Academic Institutions in South Africa*.

⁶² D. Yon, *Elusive Culture: Schooling, Race and Identity in Global Times* (New York: State University of New York Press, 2000).

⁶³ Odora-Hoppers, *Indigenous Knowledge Systems and the Transformation of Academic Institutions in South Africa*.

⁶⁴ P. Posch, "Community, School Change And Strategic Networking," in *Images of Educational Change*, ed. Haltrichter & J Elliott (Philadelphia: Open University Press, 2000).

Unlike the Western ways of teaching and learning, indigenous knowledge systems do not view a human being as an individual who competes with other humans. It views people as collectives who need one another to live in peace and social solidarity. Indigenous styles of teaching look beyond just gaining knowledge but on how an individual can be responsible with the knowledge learnt to build their communities. It focuses on the interconnectedness of individuals with their environments and communities and how they can be socially responsible with the knowledge they gain. It further teaches the students through experience, where they learn through doing and not just observing. Teaching in indigenous knowledge systems is more practical than theoretical because it believes students learn better when doing than looking at the teachers or trainers doing the work.

This is where language also plays a crucial role in the teaching and learning system of indigenous knowledge because indigenous knowledge systems believe a person learns better when they are taught in the language they understand. The primary way to communicate with the environment is through language. Words keep stories, customs, cultures, and identities alive. Language is a vehicle by which thoughts, customs, desires, histories, and knowledge are communicated. People without their own language have no power or unique identity. If the annihilation of the original slave language was used to create “perfect” slaves, who feared their masters, then the use of indigenous languages in teaching could achieve the reverse process.⁶⁵ Thus, a decolonization of the African mind would be achieved.⁶⁶

CONCLUSION

The paper aimed to explore if decolonization can be achieved within higher education institutions of South Africa through the use and application of indigenous knowledge systems. It is evident that HEIs in South Africa have adopted a more Eurocentric paradigm into their teaching and learning agenda. They have marginalized indigenous pedagogy enshrined in indigenous worldviews and indigenous philosophies. African ways of knowing have a space and role to play in ensuring that the HEIs respond positively to the needs of the broad community. This means that the teaching and learning agenda of any HEIs should be developed based on grassroots problem-solving and development. This will ensure that these institutions remain relevant and won't be oblivious to the educational needs of indigenous communities in which they exist. Furthermore, the sustainable development agenda echoed by the kind of education received in HEIs will be attained if indigenous pedagogies and a model of co-creation and co-development of the curriculum are enforced. Indigenous pedagogy enhances the teaching and learning agenda of any African institution of higher learning. Furthermore, without indigenous methodologies, research in institutions of higher learning will continue to marginalize groups that are viewed as minorities. There is a need to integrate these methodologies carefully and thoroughly into educational systems so that research can accommodate both the researchers and participants. Members of the communities are not objects to be studied, they are active research participants that has existed for many years and they should be given the recognition they deserve. Indigenous knowledge systems offer aspects of teaching that the modern formal teaching styles can learn from to improve the learning experiences of both students and learners in different sectors of education.

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