

## Inaugural lecture for Prof Sindile Amina Ngubane

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Colleagues from the University of South Africa

Colleagues from other universities

Students

Friends and family

Distinguished guests

Ladies and gentlemen

Good day (**whatever the time where you are**) and thank you for logging in to this lecture.

The title of my presentation is **Breaking the access barriers through transdisciplinary research, one brick at a time.**

Allow me to introduce you to the core of what started my journey we are celebrating today. I will narrate to you the story of Sisi Bawinile and Marinkie.

**BAWINILE:** The beginning: When growing up, my mother maNdaba had a friend called Aunt maMtolo wakwaZungu. MaMtolo had a daughter called Bawinile, who like many other blind young people had to travel far away from her home in Pietermaritzburg at a young age so she could access education at a special needs school. The only SNE school that she could be accommodated at was more than 300km away from our village. Through difficulties, she managed to make it to university but still faced challenges with gaining equitable access to education.

**MARINKIE:** Is a student with autism, who had been complaining that she is not getting the mark she deserves in her assignments. After a consultative meeting with disability experts, the disability experts identified that she had autism and advised the lecturer to rather give her an oral exam. After repeatedly underperforming, Marinkie got distinctions when she was examined in a manner that considers her ABILITIES.

These real-life stories should convince you of the important role that researches both formal and informal contributes to evidence-based improvement of teaching, learning, assessment, and student support strategies. This topic reflects the years of research and publishing on access for marginalized students to break the barriers to access through transdisciplinary research

The outline of my presentation is as follows:

- 1) Access to education
- 2) Persons (students) with disabilities
- 3) Transdisciplinary research
- 4) Pushing for Access through transdisciplinary research
- 5) Responding to the barriers in access crisis through research
- 6) My suggestions for using research to enhance access to education in Africa, I will also highlight some areas for future research toward the full enjoyment of access in Africa.

### **The Beginning:**

*[Access to education is everyone's birthright, and as such,] States Parties [are mandated to] I ensure that [this also applies to] persons with disabilities [by creating] access [to] general tertiary education, vocational training, adult education, and lifelong learning without discrimination and on an equal basis with others. To this end, States Parties shall ensure that reasonable accommodation is provided to persons with disabilities.*

At the global level, the United Nations Education and Science Cultural Organisation (UNESCO) promulgated a series of legislative frameworks to emphasize the importance of the right to education, with some of the notable ones being:

Universal Declaration of Human Rights, 1948  
Convention against Discrimination in Education, 1960  
International Covenant on Economic, Social and Cultural Rights, 1976  
Convention on the Rights of the Child, 1990  
Salamanca Statement, 1994  
Dakar Framework for Action: Education for All, 2000  
Convention on the Rights of Persons with Disabilities, 2006  
Transforming our World: the 2030 Agenda for Sustainable Development, 2015  
The General Comment No. 4 of the CRPD, 2016  
South African Constitution, Section 29

Most African countries are party to these legislations and their Optional Protocol and are, therefore, obliged to implement these instruments. While South Africa does not provide for the RTE in its

constitution, it has a strong Bill of Rights, which encompasses elements of the RTE as recognized in the South African country report to the African Commission on Human Peoples Rights. Furthermore, Gutto (2006) argues that RTE is an implied right in the South African legal landscape. Achieving this right necessitates the involvement of all South African with special attention to persons with disabilities who suffer systemic exclusion, in various sectors including higher education.

Yet, before the adoption of the CRPD, and specifically after apartheid, South Africa adopted a constitution characterized by the need to protect human dignity and equality. To this end, it provides the right to universal education as follows:

Everyone has the right to basic education including adult basic education and *to further* education which the state through reasonable measures must make progressively available and accessible. The right to further education could be interpreted as the right to higher or tertiary education.

To give effect to this provision, various policies were adopted to ensure the enrolment of students with disabilities in higher education. To foster non-discriminatory access and inclusive education, institutions can rely on open distance learning education (ODL), which opens education to all, including students with disabilities. It is in this context that the ODL institution adopted the Access Policy which promotes the provision of higher education to “previously disadvantaged groups such as Blacks, women, people with disabilities, the rural and urban poor, and adults who have missed out on opportunities to access higher education” in South Africa.<sup>1</sup>

Since the inception of democracy in South Africa in 1994, most higher education institutions embarked on restructuring and revisiting their educational policies. Most of these policies have adopted a constitutional approach to redressing the injustices of the past which is a core objective of the RTD discourse. As indicated earlier, the right to ‘further education’ or higher education is clearly provided for by section 29 of the constitution and this resonates well with the CRPD (Art 24) the Universal Declaration of Human Rights (Article 26 (1), and the World Declaration on Education for All. To give effect to the right to further education to all, the ODL policy was adopted. In its objective to remedy the inequalities of the past, it applies to all previously disadvantaged groups as well as to students with disabilities.

### **Theoretical grounding**

As I have been carrying out research individually, and collaboratively through postgraduate supervision and with my postdoctoral fellows, I realized that breaking down access barriers cannot be

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<sup>11</sup> UNISA ODL Policy, 2008, our emphasis.

a one-person task. Therefore, as per the theme of this inaugural lecture, I am humbled to declare that **Transdisciplinary and collaborative research** stands to play a critical role in dismantling the barriers to access.

While multi and interdisciplinary research has informed my scholarly pursuits, I feel that transdisciplinary has grounded my work even more. Transdisciplinary, is defined as a “common set of axioms for a set of disciplines”, “marked by an exponential growth of publications, a widening array of contexts, and increased interest across academic, public, and private sectors” (Klein, 2014: 69). Transdisciplinarity is a new means of knowledge production (Gibbons, et al., 1994), a philosophical movement (McGregor, 2014: 1) which is aimed at solving problems that require scientific, technological, and societal solutions (Gibbons, et al., 1994). McGregor (2014: 2-3) rightly points out that MIT is appropriate in “connecting science, politics, and technology with society in a way that respects the survival of humanity in a future that is worth living”. Klein (2014) highlights three concepts of transdisciplinarity: transcendence, problem-solving, and transgression. I will briefly unpack each in relation to my scholarly work:

**Transcendence:** inspired me to think beyond my discipline and strive towards tapping into different disciplines to create new solutions and new knowledge towards ensuring that marginalized students including students with disabilities achieve their RTE through equitable digital access. Although not the focus of this presentation, the same transcendence is the impetus for my work with incarcerated students, but that’s a story for another day

**Problem-solving:** enabled me to view scholarship to solve real-life problems. Lack of access to equitable access for the marginalized is an old problem that has always been addressed through disciplinary approaches. I, therefore, began reaching out to fellow researchers, learning designers, educators, and service providers including traditional societies, policymakers, and religious and traditional communities to have engaged in research about how they cater to marginalized communities.

**Transgression:** doing work that is grounded on Critical theory questions traditional ways of thinking and knowing, if those ways do not fulfil the mandate of social justice. So, this concept does not seek to reject the use of disciplinary inquiry but promotes reimagining, reframing, and reformulating the ways of thinking, researching, and influencing societal change. Klein (2014) states that transgression “allows established boundaries and limitations to be challenged and existing knowledge to be recontextualized, and in so doing opens up new routes to discovery, insight, and innovation” (Rousseau, Wilby, Billingham, & Blachfellner, 2018: 65). As Klein (2004: 521) rightly postulates, doing MIT research is “simultaneously an attitude and a form of action”.

## **Kinds of disciplinarity**

Mono-disciplinarity: is single discipline-based and addresses a single aspect of a complex phenomenon

Multi-disciplinarity: is several disciplines based and addresses multi aspects of a phenomenon without trying to bridge the differences between them.

Cross-disciplinarity: several academic disciplines based on and address the same aspect of a complex phenomenon, while bringing the methodological differences together to create a common solution.

Inter-disciplinarity: is a combination of several disciplines that addresses a new perspective through a blend of different disciplines.

Trans-disciplinarity: is a connection of several disciplines using different disciplinary frameworks with an aim of enhancing the integrated solutions to life problems.

The above kinds of disciplinarity as outlined by (Klein, 2010, Nicolescu, 2010, Rousseau & Wilby, 2014) affirms that scholars who work together through MIT do not necessarily lose their disciplinary focus and expertise instead they put together with other scholars to solve real-life problems.

Through the years, I have relied on transdisciplinary research to engage with issues of inclusivity, particularly with students with disabilities. My research then moved to technology/ digital issues into inclusivity research, all grounded by transdisciplinarity. Due to my career as a researcher that aligns herself with critical theory, below I demonstrate how collaborative research can be employed to question theory and practice in educational institutions. You will also see how deliberate collaboration with scholars from different disciplines ensures that access for marginalized students is addressed from all levels.

## **DIGITAL TECHNOLOGY AS AN ENABLER**

While the advent of technology-enhanced teaching and learning, it has become increasingly evident that digital technologies and platforms exclude people from accessing HE and other critical services. Most users in Africa experience barriers due to the lack of access to reliable electricity, reliable internet, and limited digital skills. Makoe and Shandu-Phetla (2019) posit that students use different technologies for socializing, learning and assessment purposes. However, they highlight that since most of these students use mobile technologies, learning and assessment should be designed to suit the student's contexts and needs. Students with disabilities on the other hand are never regarded when designing learning for both conventional and mobile technologies (Zongozzi & Ngubane, 2021). These authors argue that designing learning and assessment without considering diverse student needs leads to high levels of exclusion.

Ongoing research indicates that more effort and skill need to be exerted to ensure that all digital learning platforms are designed for functional diversity (Zhang, et al., 2020). Functional diversity (FD) enables all diverse users to access online resources and platforms. Instead of addressing inclusion solely for those with disabilities, FD would ensure that all persons can equitably participate in learning through e-inclusion or digital inclusion. Sanchez-Gordon and Lujan-Mora (2013, 2018) argue that equitable digital inclusion means designing for access for the elderly and those with permanent or temporal impairments “activity limitations and participation restrictions” (Zhang, et al., 2020: 03) which could be caused by illness or injury.

Higher education is indispensable to access the job market, earning a high income, and social status, and enjoying human dignity in general. For persons with disabilities, higher education is considered the bridge needed to tackle poverty, which is an impediment to the realization of RTE. Consequently, ensuring access for students with disabilities to high education would enhance their chances to improve their standards of living and enjoy their RTE. Article 24 of the Convention on the Rights of Persons with Disabilities (CRPD) provides:

*States Parties recognize the right of persons with disabilities to education. With a view to realizing this right without discrimination and based on an equal opportunity, States Parties shall ensure an inclusive education system at all levels and lifelong learning.*

**A question to ask then ladies and gentlemen, distinguished guests is why there is a need to examine how access is enriched by transdisciplinary research**

While the manifestations mentioned above are critical in framing RTE, they demonstrate that South Africa still has a lot to do to address the issue of access as the onset of Covid-19 compelled all educational institutions to provide their services digitally. This went on regardless of most employees and students being not adequately digitally literate. Equitable access continues to be a key obstacle to realizing the RTE in the South African HE contexts in the digital era. Catlin and Blamires (2019) highlight the ongoing failure of institutions of both basic and higher education to adequately design learning and assessment to ensure a positive learning experience.

Since the onset of democracy, HE institutions such as Unisa have committed to providing access to higher education for previously disadvantaged communities including those with disabilities. They have clearly stated this in their visions, missions, policies, and strategic documents. This commitment is in response to the high numbers of underqualified and unemployed students with disabilities which

lead to poverty. The United Nations Economic Commission for Africa (UNECA) point out that the education of people with disabilities rarely goes beyond the primary school level leading to most of them not reaping the full benefits of education. There is little evidence of higher education opening personal (better employment, higher salaries, and good societal standing) and public (improved quality of life and responsible governance) opportunities for people with disabilities (Chataika, et al., 2012).

It is against this background that this lecture examines the issue of access which when not well researched creates barriers to the realization of the RTE.

### **WHY FOCUS ON DOING RESEARCH ON ACCESS TO BREAK BARRIERS FOR THE REALISATION OF THE RTE?**

South Africa and Africa at large need to provide resources and skills for research on access in the digital era. The critical role of accessible higher education cannot be overemphasized, this is well captured by the Sustainable Development Goals (SDGs) Goal 4, which seeks to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.”

This inaugural lecture postulates that the achievement of authentic access cannot be realized without adequately researching the issue of access for students with disabilities, specifically in the digital era.

**Examining** different ways in which access can be achieved in the digital era pursues a new broad pedagogical space that views access as a form of promotion of human rights. Before demonstrating how lack of equitable access denies the RTE, let me first demonstrate how this right is sanctified in our university documents.

#### **-The sanctification of the RTE in higher education institutions**

Human rights are universal and are there to protect all people from abuse and violations. They contain fundamental rights and freedoms that guide relationships between persons and the state, in this case, students and HEIs. Article 1 of the Universal Declaration of Human Rights (UDHR) of 1948 states that “all human beings are born free and equal in dignity and rights”. Human rights are categorized into civil and political rights and economic, social, and cultural rights (ICCPR of 1966).

Now, I will unpack **the taxonomy or classification of Access**

#### **Access unpacked**

There are various definitions and perceptions of access depending on the given situation. I will briefly outline them below and then select the one that guides this lecture. According to the Education for All Handicapped Children Act of 1975 now known as PL 94-142 (EHA, 1975), access was primarily

theorized as *location*. Gilmour, Fuchs, and Wehby (2019) also emphasized this perspective by postulating that access is only present when students succeed in their academic outcomes. As time went by and policies changed, in the 1990s, access was defined as *participation in learning and assessments*. With the introduction of the No Child Left Behind Act of 2001 (NCLB, 2002) access was defined as *outcomes*. Though these perspectives emerged at different times, one common goal was to ensure that all educational institutions provide access for students to learn successfully.

McCowan (2012: 113) argue that access should be such that “no one should be barred from higher education for any reason other than ‘merit’, i.e., not through financial disadvantage, etc”. On the other hand, Martinez-Vargas, Walker, and Mkwanazi (2020:428) see that in South Africa, access is normally defined from the transformation lens which focuses on redressing the injustices of the past. Most universities approach access using gender and race-based lens. This limited view disregards the multifaceted discrimination which has led to their marginalization. Madikizela-Madiya (2021: 01) acknowledges the complex nature of access, arguing that merely defining access as entering the university is not enough but there is a need to see access as “access [to] quality education in a spatially just context when already in the university”. She also postulates that universities should understand that the political and ideological nature of [university] space, calls for the constant revelation of exclusion and injustice that leads to a lack of access to quality onsite and digital resources for equitable education. To researchers like Gelbar, Madaus, Lombardi, Faggella-Luby, and Dukes (2015) access is about buildings, curricula, and attitudes of academic and support staff towards students with disabilities. They further point out that the most visible barriers are of physical and instructional nature, where the academics associate reasonable accommodation with inferior curricula quality. Gelbar, et al., (2015) highlighted attitudinal barriers as barriers to access as well. Walker (2019) affirms the view that promoting and advocating for access is not usually a personal mission, instead, it is guided by an ‘interlocking system of opportunity’. Walker argues that higher education institutions have the potential to contribute towards ‘social mobility’ by enhancing the diverse students’ choices. This argument supports this lecture’s stance that work towards enhancing access requires transdisciplinary efforts. Walker’s postulation that access is determined by “objective conditions (such as economic conditions, government policy, structures of gender and race [and disability]” (Walker, 2019: 53). She ends by asking a critical question of whether access is fair. In terms of research into access, I argue that researchers should recognise the power of research in informing policy and practice and command it by immersing themselves in research that seeks to enhance access for marginalised communities hence realising the right to education.



## Accessibility unpacked

The UNCRPD defines accessibility as the guarantee to “access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and other facilities and services open or provided to the public, both in urban and in rural areas.” ISO 9241-171 (2008) defines accessibility as ensuring that products, services, and all resources are designed for effective and productive use by persons with various disabilities.

Previously, access scholars promoted those educational provisions to be anchored in ‘accessibility’ which is grounded under the 4A’s framework, which includes availability, accessibility, acceptability, and adaptability of education. In this context, accessibility entails providing a non-discriminatory education system where everybody is allowed in the classroom; physical accessibility where educational institutions should be within a safe physical reach, or via modern technology such as a ‘distance learning program; and economic accessibility characterized by an affordable education for all at secondary and tertiary levels and a free education at primary level. If this prescription is anything to go by, it speaks to the issue of universal access to quality teaching and learning environments, and in the bigger scheme of things, an all-encompassing provision of inclusive learner/student support. It is consistent with the 1962 UNESCO Convention against Discrimination in Education that defined discrimination as any distinction, exclusion, limitation, or preference based on race, color, sex, language, religion, political or another opinion, national or social origin, economic condition, or birth that impairs equality of treatment in education. Access, therefore, refers to three main areas: The first relates to entry. As the beginning point, entry is an important benchmark reflecting the level of openness of the institution in question. For higher education, entries as a quantitative indicator demonstrate how narrow or how wide the sector is, compared to existing diversity in the country.

The other aspect of access is about opening equal opportunities to take part and share in all relevant activities in the system. In other words, what does the system offers, and to whom? The third area is the output/outcome of entry and participation, pertaining to the equality of educational results or gains. According to Ramsay *et al*, this view of entry is about numerical representation and the visible outcomes of open access and inclusion. Fundamental to access and equity in higher education is the extent to which the system responds effectively to full diversity as a key indicator of its quality. Underlying this is the fact that inequalities are a result of social, educational, and economic factors rather than levels of ability and potential. This means that the system has the obligation to redress the impact of an educational disadvantage as a matter of social justice and national vitality. In general,

therefore, educational access denotes the existence of specific structures of discrimination within the institution, the broader environment, or both.

**Conclusion of this section:** All the above researchers lament the lack of equitable access which they attribute to a lack of commitment from education management to ensure that students with disabilities and all persons have positive learning experiences and succeed in their learning.

From the above definitions, the taxonomy of Access includes **availability, accessibility, acceptability,** and **adaptability**. This access issue is based on the need to ensure that all students regardless of their orientation fulfill their right to education.

### **Now let's look at them in detail starting with Availability**

**Availability** ensures that all people have universal access to education by making basic education compulsory for all. Achieving this requires that government provides the necessary infrastructure and resources for all learners. To enable access to these resources and infrastructure should be of good quality standard in terms of occupational health and safety standards. Enabling access also means that all personnel must be adequately trained and qualified to provide education to all including marginalized communities. Availability also speaks to the responsible parties' activism, voluntarism and heartfelt desire and the presence of mind to effect meaningful changes in this endeavour. This implies that realising this cause is more an act of taking a resolute stance from the position of knowing that there will be challenges that lie ahead as opposed to merely paying lip service and political expediency and to want to be seen to be seen as the catalyst for disability rights.

**Accessibility**, on the other hand, refers to the design of apps, devices, materials, and environments that support and enable access to content and educational activities for all learners. In addition to enabling students with disabilities to use content and participate in activities, the concepts also apply to accommodate the individual learning needs of students, such as English language learners, students in rural communities, or from poor homes. Technology can support accessibility through embedded assistance, for example, text-to-speech, audio and digital text formats of instructional materials, programs that differentiate instruction, adaptive testing, built-in accommodations, and assistive technology (National Education Technology Plan Update, 2017). Accessibility is also about all students having equal access to educational services, regardless of gender, race, religion, ethnicity, or socio-economic status. Efforts should be made to ensure the inclusion of marginalized groups including children of refugees, the homeless, and those with disabilities; in short, there should be universal access to education i.e. access for all.

**Acceptability** talks to the issue of Attitudinal barriers which have been pointed out as the main reason for exclusion and blockage to access. Providing access to education requires that all personnel is free of discrimination and genuinely interested in the holistic development of the student. Marginalised students like those with disabilities, migrant and displaced, rural, and incarcerated students tend to experience more discrimination than others. Acceptability goes a long way towards ensuring that this section of the population is assimilated into the domain of education at an equal footing as their peers.

**Adaptability** is largely associated with being able to design learning that adjusts and flexes to the changes that take place in society to enable the students to gain an education that contributes towards sustainable development. Adaptability ensures that processes and systems are in harmony with the needs of students in various arenas of their studentship. It is more an issue of cultivating their agency in all undertakings which may require their presence in the institution. Previously educational institutes tended to adapt a narrow perspective to adaptability by accommodating students on religious and cultural basis. However, this definition does not take the requirements of the digital era into consideration which leads to exclusion of the students with disabilities.

Ladies and gentlemen, honourable guests, allow me to share some work I did towards:

### **Breaking barriers to access, one brick at a time**

While ODeL institutions have committed to promoting access as provided in the ODeL policy, the policy has not necessarily led to transformative, inclusive practices and inclusion research. Students with disabilities and research on ensuring access in different areas of the university remain limited in the higher education sector. This violates the effort towards RTE and hinders South Africa from achieving the RTE by developing capacity for all her citizens regardless of disability.

As mentioned before the RTE is guaranteed by all the member states who ratified to promote RTE for all citizens of this world. Access is only present when students succeed in their academic outcomes (Gilmour, Fuchs, and Wehby, 2019). Access as *participation in learning and assessments*. Access was defined as *outcomes* (No Child Left Behind Act of 2001, 2002).

The issue of access has been problematized by different researchers and below I demonstrate their different take:

When I began this journey of problematizing access, I started with my doctoral work which looked at **Information and Communication Technology as a learning tool: experiences of students with blindness**. Through narrative inquiry, and life stories, I learned that though some universities have disability units that are meant to address issues of access; students are still facing systemic, epistemological, and attitudinal barriers. My study revealed that academics did not have adequate

skills to design, teach, assess, support, and research on/with students with disabilities, not due to lack of willingness, but because they had not been capacitated to design, teach, assess, support, and research for inclusivity.

Conducting research on access towards achieving RTE for all students cannot always be narrow, this work, Ngubane-Mokiwa, and Tlale (2015) looked at how children in conflict with the law were dealing with the need to access education as part of their rehabilitation. Education without digital literacy would not make them completely ready to function in the fourth industrial revolution, they would come out 'half baked'. This paper revealed the need to ensure that all educational entities including those in correctional centres, should promote digital literacy to prevent offenders from resorting back to criminal ways upon their release from prison involving themselves in crime again. This integrated model of skills should guide all educational institutions.

As per the transdisciplinary nature of my work, I started engaging colleagues that were champions in their own disciplines and niche areas on how they could problematize inclusion and disability in their works. Ngubane-Mokiwa and Khoza (2016) looked at the 'Lecturers' experiences of teaching Science, Technology, Engineering and Mathematics (STEM) to students with disabilities', working with my Honours lecturer who is renowned for his work on Curriculum and yet has taught at TVET colleges enriched our contribution on disability in TVET colleges. This qualitative study which was done through in-depth e-interviews and e-observation of classes revealed that lecturers still use traditional teaching strategies which exclude SwDs. It also revealed that SwDs get excluded from STEM subjects due to the non-adoption of innovative technologies which could be compatible with assistive technologies. Also, lecturers do not have the requisite inclusive teaching and digital literacy skills that would enable them to teach STEM in innovative ways.

The promotion of access to education requires one to be flexible and ready to adjust to any given task. While others strive to publish in isolation being an access and inclusion scholar in a space where my niche area was under-researched, Ngubane-Mokiwa and Letseka (2015) worked on the 'Shift from Open Distance Learning to Open Distance e-Learning'. This chapter explored the shift and how it could affect the marginalised students hence possibly creating barriers towards social and educational justice. The chapter then recommended that higher education institutions consider the diverse needs of their students to remain student-centered.

Of note and relevance is the work of Ngubane-Mokiwa (2016) which looked at 'Accessibility strategies for making MOOCs for people with visual impairments: A Universal Design for Learning (UDL) perspective' with an aim of demonstrating the importance of researching the interaction between the students and the learning platforms. This research provided clarification on 'multiple user

requirements for improving (learner) interaction’ (Farhan & Razmak, 2020). Zhang, Tlili, Nascimbeni, Burgos, Huang, Chang, Mohamed, & Khribi (2020) point out the importance of doing research that seeks to evaluate the accessibility and inclusiveness of Open Educational Resources (OERs) and Open Educational Practices (OEPs) ensure equitable access for marginalized students including those with disabilities. They suggest that the following accessibility principles should be used when evaluating access; perceivability, operability, understandability, and robustness.

<b>Attribute</b>	<b>Attribute description</b>	<b>Guidelines</b>	<b>Guideline’s description</b>
Perceivable	The content and interfaces of OER can be perceived by users	Text alternatives  Time-based media  Adaptable  Distinguishable	Provide a variety of forms that people need for non-textual content, such as large print, Braille, and so on.  Provide access to time-based media.  Ensure that all OER are available in some way to all users.  Make the default presentation easy to perceive by people with disabilities.
Operable	OER, including the content and interface, must be operable for users.	Keyboard accessible  Enough time  Seizures  Navigable	Make all functionalities achievable by using the keyboard.  Provide enough time for users to use OER.  Do not design OER in a way that might trigger seizures.  Support navigation and retrieval functions.
Understandable	OER, including the content and interface, must be understandable by users.	Readable	Make OER text readable and understandable.

		Predictable	Make OER contents display and operate predictably.
		Input assistance	Provide more assistance to avoid and correct mistakes.
Robust	OER must be robust enough that it can be accessed by a variety of types of user agents, including assistive technologies.	Compatible	Increase compatibility with the current and future user agents, especially assistive technologies: i.e., screen reader or Braille display devices.

Description of the WCAG 2.0 Attribute and Guidelines applied to OER (Zhang et al., 2020).

Ngubane-Mokiwa (2017) worked on 'The implications of UNISA's shift to Open Distance e-Learning on Teacher Education' which anchored itself on Unisa's policy imperatives of providing [teacher] education to previously disadvantaged African students including those with disabilities. This paper cautioned on the assumption that there is a culture of use and reliance on modern electronic technologies. It further recommended the shift to e-learning should be made with the full understanding of teaching, learning, and assessment for diverse students.

Ngubane-Mokiwa (2016) and Ngubane-Mokiwa (2018) wrote on Ubuntu considered considering the exclusion of people with disabilities, this paper emanated from the *Archaeology of Ubuntu* NRF project led by Prof. Letseka. As the KwaZulu-Natal chapter leader in this project, I ensured that we solicit the views of elders on how Ubuntu informed the treatment of people with disabilities. One would ask why we found this important. Well, because attitudinal barriers are formed through social constructions of people that are different from the norm. This study revealed that traditional society regarded the birth of a child with a disability as a curse from God and a punishment from the ancestors. It also divulged that marrying or dating a person with disabilities was unthinkable due to stigma and dehumanisation. As much as this paper reported on history but it revealed why HEIs might still find it hard to achieve equitable access. HEIs will only be inclusive when social constructions of PwDs become positive. A recommendation of using community-engaged research to renegotiate, reskill and restructure society towards genuine inclusion was made.

Manyonga and Ngubane-Mokiwa (2019) wrote on 'Curriculum Development: An enriched approach for Twenty-First-Century Open Distance Learning'. It analyzed and explored the progress in curriculum development using the Capabilities Approach in the context of massification, commodification, and the fourth industrial revolution. This paper contributed innovative ways of framing curriculum development in the current era.

Ngubane-Mokiwa and Khoza (2021) worked on 'Using Community of Inquiry to facilitate the design of a holistic e-learning experience for students with visual impairments', this paper highlighted the critical role played by Information and Communication Technology (ICT) tools in enabling the facilitation of inclusive teaching and learning in ODL contexts. It also pointed out the role of different stakeholders known as Communities of Inquiry in ensuring cognitive, social, and teaching presence. Equally, the importance of complying with policies that ensure student-centredness.

Because research is not always structured and sometimes it is called for by circumstances at hand, Manyonga and Ngubane (2021) worked on 'Curriculum Implementation and the Right to Education During Covid-19 in South Africa'. This was necessitated by the abrupt move to online learning during Covid-19-induced lockdowns, which led to the exclusion of marginalised learners and students. Traditional teaching and online/virtual teaching require different curriculum design, implementation, and delivery strategies, yet teachers were never capacitated to design for teaching and assessing virtually. Researchers should collaborate with others to assess the impact of the prevailing phenomena on human rights. This will ensure that the restrictions imposed do not impact negatively vulnerable communities like those with disabilities and from rural communities. Similarly, due to the Covid-19 accelerated digitized learning adoption, Lehong, van Biljon and Sanders (2022) did a study on the use and usability of learning management systems. This heuristic evaluation through usability testing with eye tracking, post-test system usability scale, and interviews of and about the LMS revealed findings that indicated a need for improvements. This makes recommendations among them is to ensure that Unisa LMS is 'design[ed]...to be accessible to users with special needs.... provide an option to personalize the user interface and allow users to customize features to suit their needs [this would be useful for students with disabilities too]' and so on (Lehong, van Biljon, and Sanders, 2022: 13).

For access to both basic and higher education to be achieved, there needs to be a budget for each department to ensure that access is an afterthought. This means that for each strategic goal that is translated into the operational and implementation plan, there should a consultation with experts and representatives from marginalised communities to draw a budget for actual activities. Ngubane (2021) wrote on 'Illicit financial flows and the marginalised population: A case of people with disabilities in South Africa', here, she highlighted the way marginalised communities including people with disabilities are sometimes excluded from financial benefits meant for developmental purposes. Nitsch (2016) postulates that economic marginalization also happens through exclusion from opportunities, resources, rights, and free markets. This chapter also demonstrates how donations and sponsorships that are meant for people with disabilities are squandered and misappropriated which

amounts to illicit financial flows. This kind of financial exclusion heightens the barriers to financial access.

Researchers should make a habit of researching their research practices; in doing this they should familiarise themselves with the international instruments in relation to their research interests. Zawacki-Richter, Baecker and Vogt (2009) caution distance education researchers from doing research without carefully considering the gaps and priority areas. They note that most DE research is on instructional design and individual learning processes, while, change management and innovation are unresearched. This is in line with this inaugural lecture, since the coming of Covid-19 has triggered the move to fully online learning, assessment, and support, there is a need for access research to focus on innovative ways to enhance access for students with disabilities and other marginalised populations.

### **Growing Access Researchers through Postgraduate Supervision**

Transdisciplinarity and access have grounded and revolutionized my postgraduate supervision activities. Postgraduate supervision is a critical element of knowledge production and knowledge society development. As an access scholar, I had to think deeply about how I could use postgraduate supervision to promote access for marginalised populations. I, therefore, came up with three approaches; the first one is by approaching other scholars and negotiating with them to incorporate access when they meet with students who do not have their own chosen topics, the second one is by offering to co-supervise those who want to research on inclusion related topics in all disciplines and other universities, and lastly by visiting Disabled Peoples' Organisations (DPOs) to recruit potential masters and doctoral candidates, supporting them with the application, registration, research proposal development, and supervision if needed. Ngulube (2021) asserts that academics must consider team supervision because it affords the student academic engagement spaces and knowledge pollination. This holistic proactive support contributes to the enhancement of access to postgraduate studies for marginalised communities.

Thomas Ongolo is a graduate of the University of South Africa and the University of Cape Town, specializing in Educational Curriculum Development, and Disability Inclusive Studies. He has been a consultant and advisor for several regional and multilateral organizations that include the African Union and is currently the German Development Agency-GIZ Regional Advisor for Africa and an Open World Fellow. Ongolo (2018) conducted his doctoral study on 'An analysis of policies guiding the design and delivery of an inclusive curriculum at an Open Distance e-Learning university'. The findings of this study revealed the lack of expertise in inclusive design and the lack of consequences for not designing inclusive online learning. It then made recommendations that institutions should heighten efficiency for the implementation of integrated policy and inclusion.



Maurice Takalani Mamafha is a graduate of the University of South Africa, specializing in Information Science. He is the Manager of Libraries in Ekurhuleni Metropolitan Municipality. Mamafha (2019) who was co-supervised by Profs Ngulube, Dube and Dr Ngubane had the privilege of experiencing team supervision where he knew that he could get expert supervision for his MIT topic. He conducted his doctoral study on the “Availability and use of Information and Communication Technologies for the visually impaired at selected Public Libraries in South Africa”. Through his study, he sought to explore the extent to which people with visual impairment have equitable access to public libraries. Access to libraries is critical in promoting access to information for diverse communities.

Olwethu Sipuka is a graduate of the University of Cape Town, specializing in Disability Studies and Decolonization. He has extensive experience in the developmental, regulatory, and policy advocacy sectors. He is the Director of the Young African Leadership Initiative (YALI), and a former Dean of Students at Unisa. Sipuka (2021) registered at the University of South Africa, was co-supervised by Prof Lorenzo and Associate Professors Behari-Leak and Ngubane. He conducted his doctoral study on ‘Exploring a framework for decolonized disability-inclusive Student Walk support practices in an open and distance learning institution’. This study allowed for difficult questions regarding how students with disabilities are supported in the ODeL environment from the application to after the graduation phase.

Fiona Anderson is a Learning Designer and Coordinator: Continuous Professional Development at the University of Namibia. She conducted her master’s study on “Exploring academic support strategies for Mathematics students with dyscalculia: A Case study of Open and Distance Learning”. She is now embarking on her doctoral study on “Mobile learning technologies as a learning support mechanism for students who struggle with Mathematics in Higher Education Institutions” which I am co-supervising with Dr. Shandu-Phetla who did her own doctoral study in mobile learning. One sees the convergence between disability, the teaching of Mathematics, and mobile learning which justifies team supervision.

Grace Olamide Adeleke is an MEd graduate of the University of South Africa, specializing in Open Distance Learning. She is an English tutor, editor, and reviewer. She has an English education degree from a university in Nigeria, PG Dip in Marketing Management. Her master’s study on “Exploring teaching presence as academic support for students with disabilities in open and distance e-learning” was co-supervised with Dr Zongozzi. She has now applied to pursue her doctoral studies at Unisa.

### **Multiplying oneself through Mentorship**

This is the most exciting part of being in this profession, it allows you to multiply yourself, and develop giants that add to knowledge production in ways that could be more innovative than yours. As much as professors must mentor as part of their job description, only Ubuntu (Umntu ngumuntu ngabantu) would make an individual passionate about sharing their skills. Most universities have formal mentorship programs which tend to focus on the administrative 'tick-box' exercise, mentors that normally inspire others are those that move beyond the formal programs. Being a professor in a given space makes you a leader and leadership makes you a selfless servant who should ensure that there is enough supply of scholars as per the National Development Plan 2030. South Africa has set the target of producing 100 doctoral graduates per million by 2030 (Reddy, 2017; Van Schalkwyk, Lil & Cloete, 2021). Having a doctoral qualification should transcend to enthusiasm for research and knowledge production rather than just title change, and mentorship for both academic and support staff would make this a reality.

Based on this, I will outline the two means which enabled me to reach the main beneficiaries and important stakeholders in the creation of knowledge. Community engagement, Mentorship, and Academic Citizenship are the vehicles that I strongly use to provide access to research-related education to the marginalised without registering for a formal qualification. Through working with postdoctoral fellows, I was able to expand the access for students with disabilities research further to other areas of education. Part of mentorship requires that you include emerging scholars and postgraduate students as members of research projects.

These papers were published with mentees, and they also promote access scholarship from different angles.

### **Enriching access scholarship through community engagement**

As part of promoting holistic development and following the disability slogan of 'Nothing about us, without us', through community engagement we asked people with disabilities what they would like us to research. To fulfil the adapted slogan of 'No research about us, without us', Ngubane-Mokiwa and Chisale (2019) tackled the often-ignored rape and sexuality topic for persons with disabilities, through the paper on 'Male Rape or Consensual Sex: Hidden Hegemonic Masculinities by Zulu Speaking men with disabilities'. This paper contributes to gender studies concepts of consensual sex, male rape, and masculinity discourses. It also shines a light on the contradictions that exist amongst Zulu males with disabilities regarding their sexual acts with their caregivers. Most importantly it reveals the perceived power dynamics that could affect male students with disabilities in educational institutions. This could make it difficult to resolve complicated sexual acts where men feel they are masculine enough if they turn down unwanted sexual advances from women.

## **Influencing stakeholders through Academic citizenship (AC)**

Academics are not meant to only play a developmental role inside higher education institutions, instead, they must be actively involved in different areas of society to influence and inform teaching and learning. Nørgård and Bengtsen (2016) point out the importance of universities integrating with society and society integrating with universities. As highlighted above in the research outputs, I believe that it is through working together that equitable access will be achieved in society, academia, government, non-government organizations, and the corporate sector. Coldwell, Papageorgiou, Callaghan, and Fried (2016) in their exploratory study on perceptions of academic citizenship at one Swedish and South African university, discovered that there are similarities in the perception of academic citizenship in both regardless of the difference in 'socioeconomic environment'. They however highlight that in Sweden academic citizenship is related to academic well-being.

Tagliaventi, Carli, and Cutolo (2020) argue that academic citizenship in academia is not chosen voluntarily, academics have specific professional organisations related to their disciplines within which they play a role. They also argue that AC is done with an expectation of formal or informal recognition, this recognition enhances the reputation of the institution. As a researcher within an Open Distance e-Learning institute, I had the opportunity to be a disability expert at the African Union disability high-level consultations. This gave me a chance to influence the thinking around the importance of research in enhancing the inclusion and access work they do through Non-Governmental Organisations (NGOs). Through these AC roles, I have managed to get more people with disabilities interested in pursuing their postgraduate studies in their chosen fields.

I am currently part of the following entities, where I try and push the idea of access for marginalised students, particularly those with disabilities and the incarcerated; DEASA, NADEOSA, ACDE and ICDE.

I also wrote and co-wrote and published in normal media with the aim of disseminating my research to other people other than academics. These articles were:

**-The Conversation:** South Africa's new higher education disability policy is important but flawed

Authors: Oliver Mutanga, Bothwell Manyonga, and Sindile Ngubane

**-The Conversation:** Online learning can be hard for students with disabilities: how to help

Authors: Sindile Ngubane & Nkosinathi Zongozzi

**-Contribution to University World News:** HE in prisons still 'patchy' despite the expansion of e-learning

Now let's move to my last point, which is to present my future plans and research for Breaking the barriers to Access for the achievement of Authentic Access for All in Africa:

## **Future Plans for Authentic Access for All through research**

I plan to:

- Work together with CLAW to create an Access for Inclusion Accountability management guide. Consequence management should be mandatory at all educational institutions to curb deliberate barriers to access which deny marginalized students the right to education development. [Academic Citizenship].
- Co-design an e-Inclusion policies at the government level filtering down to all departments including DBE and DHET. Part of being responsible global citizens is to learn from those who have done it well. I am therefore eternally grateful to Prof. Sandra Sanchez-Gordon from Ecuador. I believe that our country and institution have a lot to learn from Ecuador as their scholars have done more research towards improving their field of disability support from government-influenced and monitored inclusion policies.
- Equity in education means increasing all students' access to educational opportunities with a focus on closing achievement gaps and removing barriers that students face based on their race, ethnicity, or national origin; sex; sexual orientation or gender identity or expression; disability; English language ability; religion; socioeconomic status; or geographical location.
- Design a collaborative continental project that seeks to promote Authentic Access for All for marginalised students.
- Work with identified digital access pioneers to establish functional diversity at ODeL institutions.
- Fully direct my access research on digital learning platforms, digital skills for marginalised students, and anything technology that will make Future Learning accessible for all.
- Access 101 policy implementation plans through Easy access to Litigation in case of Access violation (Dashcam-like for SwDs ready to collate Incidents of violation, anytime, anywhere).

## **In conclusion Ladies and gentlemen, distinguished guests**

As I end, allow me to reiterate the essence of this lecture, that **Breaking the barriers to access to achieve authentic access for all** requires rethinking and restructuring systems and discourse within a transdisciplinary lens. Since the advent of Covid-19 most educational institutions has adopted online learning as a teaching and assessment mode. I do acknowledge the different initiatives and research that have been done toward advocating for equitable access. However, I am cautioning that the new world order requires that we rethink and innovate towards ensuring that digital access is embedded in all online platforms including those of HEIs to enable all people including marginalized populations to have equitable access to education for sustainable living. This lecture proposes the **adoption of**

**transdisciplinary research to widen access for all** that looks at different aspects of access for marginalized students to **ensure the availability of evidence-based data to influence educational practice** for a sustainable future.

**Thank you for sacrificing your valuable time to come here or to listen to me online**

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