Original Research Article

Experiences of Dwarfism in Higher Education Learning Environment in South Africa

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ABSTRACT

Background: Students with short body stature, such as those with dwarfism, not only find it difficult to access higher education institutions, but also experience physical and psycho-emotional trauma. The experiences of accessibility and inclusivity in learning environments for students with dwarfism at a university of technology in South Africa premise this study.

Methodology: The study employed interpretative phenomenological analysis, which allowed the participants to share their lived experiences of dwarfism in relation to their learning environment in a higher education institution (HEI). The theoretical framework of Rawl's distributive justice, which promotes equitable distribution of social resources and universal design that emphasizes equal access to and use of goods and facilities, further supported this. Purposive sampling identified two female participants with dwarfism. An in-depth qualitative research design was used to collect data on the lived experiences of accessibility and inclusivity in the participant's learning environment. The phenomenological data analysis, which involves data bracketing and reduction methods, explicated the themes.

Findings: The findings revealed that the learning environment for students with dwarfism is in contradiction with universal design and social justice principles. Such an environment is detrimental to their health, quality epistemic access, self-esteem, and academic performance.

Conclusion: The findings of this study will be instrumental for developing and designing a universal learning environment. Failure to provide learning environments that adhere to universal design and social justice principles is tantamount to discrimination and the violation of the basic human rights of minority groups.

Keywords: learning environment, dwarfism, social justice, inclusivity, universal design

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INTRODUCTION

The goal of this study is to evaluate the accessibility of the learning environment for students with dwarfism in higher education institutions. People with dwarfism are considered a minority group, with one individual out of 25,000 people affected by this condition (Pritchard, 2021; Zuinudin et al., 2019; Ktenidis, 2022). Approximately 652,000

individuals live with this condition worldwide. Dwarfism, also known as skeletal dysplasia, is a group of conditions caused mainly by a genetic mutation or an inherited genetic change characterised by shorter than normal skeletal growth that manifests in the legs, arms or trunk, resulting in exceptionally small body stature (Pritchard, 2016; Pritchard, 2021). It is common for such people to experience other physical challenges such as reduced muscle tone and strength, breathing problems, curvature of the spine (or spinal stenosis), bowed legs, limited joint flexibility (arthritis), lower back pain and leg numbness (Mohammad, Mohammed & Mandegari, 2015). Pritchard (2021), who lives with this condition, argues that most people living with dwarfism have an average body stature of 147 cm.

The dwarfism phenomenon is often associated with the medical model of disability, which suggests that the disability should be medically treated (Shakespeare, Thompson &Wright, 2010). While the medical model of disability cannot be ignored, the social model proposes the provision of a socially just, easily and equally accessible, non-discriminatory as well as enabling environment for people with impairments and non-impairment (Duma, 2019). Most people with physical disabilities, particularly those with dwarfism spend at least 90% of their day trying to gain access in social unjust environments (Mohammad et al., 2015). Their condition is sometimes confused with that of people who use wheelchairs for movement (Mohammad et al., 2015; Pritchard, 2016), in terms of accessible environment. Different countries refer to this type of disability under different names to avoid insulting people with dwarfism. While, in most European countries, they are referred to as "little people" or "people with limited growth," in African countries, they are referred to as "dwarfs" (Ktenidis, 2022). None of these labels respect their condition as it is a constant reminder of their condition.

Furthermore, people with short body stature are sometimes abused and face a lack of justice when they are used as money-making entertainment figures- an experience that many find humiliating (Bourmans, 2019; Pritchard, 2017). According to Pritchard (2016, 2021), many people with dwarfism face social injustices and exclusion since social environments and facilities are designed for people of average height. This often leads to dependency and frustration because they are forced to seek alternatives if no one is willing to assist them (Zanuid et al, 2019). Ktenidis (2022) contends that students with dwarfism in higher education are more susceptible to violence and bullying. Owing to their diminutive size, they frequently fall prey to maltreatment and dehumanisation, and their rights are predominantly violated.

Accessibility in higher education institutions

Accessibility in higher education institutions (HEIs) for students with disabilities is gradually receiving positive attention (Duma, 2019; Duma & Shawa, 2019; Mosia & Phasha, 2020). Conversely, there seems to be meagre studies on accessibility of learning environments for students with dwarfism in the South African context. Despite the increasing number of students with disabilities enrolled for tertiary education, the lack of enabling environments for students with dwarfism emphasises and necessitates the responsibility of HEIs to accommodate the diverse needs of all their students. This automatically prescribes the direction of change and transformation in terms of policies, practices and learning environments of HEIs (Mugambi, 2017). Globally, HEIs have many traces of ableism in their practices, policies, culture, and infrastructure (Pritchard, 2016; Dolmage, 2017; Evans, 2021) in terms of spatial distributive justice for students with disabilities. This is sufficient evidence that HEIs were designed to cater for 'healthy' and able-bodied students, thereby excluding people with disabilities (Evans, 2021; Mutanga, 2017).

Goal 4 of the 2030 Agenda for Sustainable Development (United Nations, 2015) has increased the responsibilities of HEIs, mandating them to ensure inclusivity and equitable quality education through social inclusion. HEIs are seen as "houses of knowledge" and

"houses of transformation," tasked with the dissemination of knowledge and fostering change (Purcell, 2019; El-Jardali, 2018; Brunner & Labraña, 2020), hence necessitating an expectation of equality and a non-discriminatory atmosphere. Students expect equal and fair treatment while seeking the tools (qualifications) to combat global poverty, unemployment, inequality, and injustice of the world. If access to education is a fundamental human right, creating an equitable learning environment should not be a challenge.

The right to accessibility and inclusivity for people with disabilities is entrenched in varying pieces of legislation such as, the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (United Nations, 2006) and in the South African White Paper on the Rights of People with [a] Disability (Department of Social Development, 2015). The South African Constitution, as per Section 29 (1), Section 2 and Section 9 (3), advocates for the basic human rights of people with disabilities and the provision of an inclusive and conducive environment (RSA, 1996). The purpose of this paper is, therefore, to examine the experiences of accessibility and inclusivity of learning environments for students with dwarfism at a university of technology in South Africa. The findings aim to bring new knowledge and suggestions for improving social justice in higher learning environments.

Objective of the study

The objective of this study is to critically evaluate the inclusivity of tertiary educational institutions for individuals with dwarfism through the analytical social justice framework and universal design.

Theoretical framework

Social justice

The study is premised on Rawls' theory of social justice, which seeks to promote a fair and equitable distribution of power, resources, access, and opportunities (Rawls, 2020). This theory acknowledges that deeply entrenched inequalities exist in societies where minority needs are disregarded (Sabbagh & Schmitt, 2016). Injustices continue to negatively impact students with disabilities in higher education settings, yet untransformed institutions continue to admit such students (Matshediso, 2010). While policies addressing the rights and needs of people with disabilities are often in place, the implementation of these policies has been remiss, resulting in a lack of enforcement and sanctions for non-compliance thereof (Matshedisho, 2010; Mutanga, 2017). To address these deficiencies, Rawls' social justice theory calls for retributive and distributive justice for minorities and vulnerable groups (Sabbagh & Schmitt, 2016). Retributive justice aims to rectify injustices by restoring equality and removing barriers, while distributive justice advocates for the equal distribution of benefits and the protection of the vulnerable.

Universal design

Providing an accessible and user-friendly physical-built environment with no barriers should not only be associated with people with disabilities, rather it must be a standard norm (Dalton, Lyner-Cleophas, Ferguson & McKenzie, 2019). Denying people access to such environments is tantamount to discrimination and exclusion and is against the constitution of the country which advocate for equity. The universal design (UD) concept focuses on engineering and architectural designs that intend to cater for the diverse needs of society (Burgstahler, 2008). UD expounds seven principles that can be applied to both public and private environments, and whose products, services, infrastructure, furniture and facilities should provide inclusive and equal access to all (Center for Universal Design, 2008). These are:

- ***Equitable use***: The design should not only be useful to people with diverse abilities but must also provide the same means of use for all users.

- ***Flexibility of use***: The design should accommodate a wide range of individual preferences and abilities. It also includes choices in methods of use, facilitate the user's accuracy and precision, and provide adaptability to the user's pace.
- ***Simplicity and intuitive***: Regardless of the user's experience, expertise, language skills, or present focus level, the design should be simple to use.
- ***Perceptible information***: The design should communicate necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.
- ***Tolerance for error***: The design should minimize hazards and adverse consequences of accidental or unintended actions.
- ***Low-level physical effort***: Allow for a reasonable effort on the part of the user, accommodate variations in hand and grip size, and minimize sustained physical effort.
- ***Appropriate size and space for approach and use***: Regardless of the user's body size, posture, or mobility, the necessary size and space should be supplied for approach, reach, manipulation, and use. All potential users' reach and manipulation needs should be considered.

UD principles are critical in providing a conducive, inclusive, and equitable learning environment suitable for both students and staff. Dalton *et al.,* (2019) argue that UD principles should be considered in the establishment of enabling learning environments to provide access for all regardless of ability and disability.

According to Moriña & Morgado (2018), architectural and infrastructural barriers continue to exist at many HEIs across the globe. Research in the current HEIs environment expostulates that many university buildings and teaching and learning facilities do not meet ergonomic standards, especially for people of alternate body sizes (Pritchard, 2021; Khumalo, 2020). Physical facilities and furniture are frequently designed with only the ergonomic principle of an 'average-sized person' in mind (Uche & Okata, 2015; Pritchard, 2021). Ntombela (2020) highlighted the persisting challenge of the inaccessibility of learning environments experienced by students with disabilities due to discriminatory architectural designs in HEIs. According to Uche and Okata (2015), the teaching and learning environment in HEIs "...must be designed in such a way that it matches the capabilities, limitations and needs of the users" (p. 34). Parvez, Parvin, Shahriar & Kibria, (2018) concur and recommend that furniture and equipment within the learning environment should adhere to anthropometric principles. This means that it should be designed for:

- all body sizes which could range between 5th and 95th percentile; and
- average, more common body sizes and postures.

The absence of ergonomic considerations in such designs has a direct impact on the level of comfort that educators and students of all body sizes and abilities experience in their quest to achieve their educational objectives. For instance, the appropriate posture requirement design of chairs and desks is important if teaching and learning is to occur equally for all students in the classrooms, offices, laboratories, libraries, and residences or wherever they are accommodated. The design of furniture should thus consider anthropometry, which refers to the dimensions of the body in terms of body size, shape, strength and capacity (Uche & Okata, 2015; Parvez et al., 2018). In order to examine the social fairness and accessibility of the learning environment for students with short body stature, this study will apply four UD principles, which are: i) equitable use, ii) flexibility in use, iii) low-level physical effort, iv) appropriateness and space for approach and use.

METHODS

Study Setting

The ultimate goal of this study is to evaluate the accessibility of HEIs for students with dwarfism; thus, the study is conducted in a historically disadvantaged institution (HDI) in South Africa. Such institutions continue to struggle with providing basic facilities, not only for students with disabilities but also for all students and staff (Ayuk & Koma, 2019).

Research approach and design

This interpretative phenomenological analysis (IPA) study aims to evaluate the fundamental and invariant components of the participants' lived experience of dwarfism in relation to the accessibility of their learning environment. IPA research is mostly suitable for exploring uncommon, sensitive, and personal experiences. When participants offer a comprehensive narrative of their experience with the phenomenon, these accounts may explore emotions, convictions, attitudes, perceptions, and cultural influences. Consequently, the data generated is exclusively qualitative and non-numerical, as the participants provide a profound comprehension of the occurrence (Greening, 2019). The analytical framework used in this study–IPA-, as described by Alhazimi and Kaufmann (2022), which integrates descriptive and interpretative phenomenology, forms the basis of the study. Bracketing is essential in phenomenological studies to mitigate bias and ensure the authenticity and reliability of the research (Greening, 2019).

Sample Size

Determining the sample size for IPA studies may come with challenges as participants could not always be willing to talk about their experiences where the case is sensitive (Subedi, 2021). According to Alase (2017, p.13), "in a phenomenological research tradition, the size of the participants can be between 2 and 25." Disability is quite a sensitive issue and dwarfism is a rare condition. There are only two registered female students with this impairment in this institution. People with dwarfism are a minority, with approximately 652,000 individuals worldwide living with this condition (Warwick, n.d.; Pritchard, 2021; Ktenidis, 2022). There are approximately 55 registered students with disabilities in this institution. Thus, a purposive sampling was employed (Alhazimi & Kaufmann, 2022).

Data Collection

A 30-minute in-depth interview with each participant was done after gaining consent for participation from each student. Interviews were held in a classroom setting (but not during class hours), allowing participants to exhibit some of the accessibility challenges they face in their learning environment. The interview questions were developed based on four UD principles, which are: equitable use, flexibility in use, low-level physical effort, appropriateness, and space for approach and use as well as of social justice. The following questions were structured from the UD principles and social justice to guide the interviews:

- Equitable use: In what ways does this design ensure fairness and accessibility for diverse users?
- Flexibility of use: How does the design enable people with varying abilities to use it in multiple ways?
- Low-level physical Effort: How does this design minimize the physical effort required for use?
- Appropriateness space for approach and use: How can people of varying sizes and abilities use this design to meet their specific needs?
- Social justice: How equitable is the learning environment equitable to all users?
- These principles are more concerned with physical access and equitable use of the learning environment to all users regardless of their body stature, which is the focus of the study.

Procedure and Ethics Approval

The researcher followed the research ethics procedures set by the institution, and ethical clearance was granted to continue with the study (ref RD1/09/022). Conducting research involving minority and vulnerable groups comes with some restrictions because they need to be protected against any form of abuse and exploitation. The institution where the study was conducted does not yet have a disability unit, thus the student counselling unit was requested to be present to provide guidance on how to approach the participants. Furthermore, to protect the identity of the two participants, pseudonyms, 'Queen' and 'Joy' were used in accordance with the Protection of Information Act 4 of 2013.

Data Analysis

Husserl, Giorgi, and Heidegger, the pioneers of phenomenology, argued that the essence of phenomenology lies in descriptive phenomenology and interpretative phenomenology, which enable others to understand the experience of a phenomenon (Alhazmi & Kaufmann 2022; Thonhauser, 2023). The analysis of IPA data is quite rigorous and intense, especially considering the complexity of the phenomenon. I followed the data analysis steps, which include transcription, initial coding, categorization, and up to the final stage of producing themes. Qualitative data analysis may be similar; however, IPA data analysis requires bracketing and reduction (reduction is the process of re-describing and explicating meaning from the described experience). Researchers can achieve this by distancing themselves from the research to establish credibility and trustworthiness.

Alhazmi & Kaufmann (2022) define data analysis as a process that involves explicating meaning and themes from the thick texture of lived experiences to form a formidable structure. "Researchers adopting these perspectives 'borrow' the participants' experience and their reflections on their experience to get a deeper understanding and to grasp the deeper meaning of the investigated experience" (Alhazmi &Kaufmann, 2022, p.2). The phenomenological reduction as explicated in Moustakas (1994) deals with the texture (raw data as experienced) and structure (themes as understood by the researcher). This kind of analysis puts more emphasis on 'horizontalization of data' (developing meaning units for each participant's experience) (Alihazimi & Kaufmann, 2022), which assisted me in familiarising myself with data coding and identifying and interpreting themes (Moustakas, 1994; Alase, 2017; Van Manen, 2017; Alhazimi & Kaufmann, 2022). The thoroughness of the IPA method ascertains the trustworthiness, credibility, and transferability of the study as the researcher continually engages with the data to get its essence (Loh, 2013; Korstjens & Moser 2018; Stahl & King, 2020).

RESULTS AND DISCUSSION

The participants expressed their frustration with their learning environment, which is riddled with a disregard for UD, social justice, the social model, and inclusive education principles. They reported difficulties in accessing various university facilities due to their small body stature. Four themes were derived from the data analysis: inequitable access to facilities, discomfort, and negative impact on academic work, and preference of online learning.

The principles espoused by the concepts of inclusive education, social justice, and UD are inextricably linked, as they all advocate for equal access and full participation within HEIs (Mugambi, 2017). Any learning institution's primary responsibility is to ensure an equitable learning environment by eliminating systematic barriers. When this mandate becomes visible, it is a significant indication that the institution recognises all its students' human rights (Dalton et al., 2019).

Inequitable access to facilities

Participants' descriptions of their learning environment revealed issues such as limited accessibility and inappropriate facility and furniture. The findings revealed that university infrastructure and facilities are not equitable and flexible to students with small body stature. Queen stated:

> *"Our disability is different and difficult. We need special accommodations in terms of furniture and other facilities. This makes life difficult because when you look around, there are very few who have this condition. It makes me feel this will never improve because institutions will not change their structures and systems for a few people".*

Being denied access has far reaching consequences, which may leave students with a state of helplessness, dejection and left behind, which could negatively affect their academic progression and could result in low self-esteem. Joy shared the same sentiments:

> *"My body size [dwarfism] and challenges we encounter seem not important or unnoticed. There is no furniture in the university that is designed to suit my needs [i.e., for dwarfism] and it is difficult to sit still in classrooms for two hours…Circumstances force us to be strong, find ways of coping and focus on our academic work".*

A mismatch between students' anthropometric dimensions and the dimensions of the furniture can also have a negative impact on their health and performance (Burgstahler, 2008; Mohammad et al., 2015; Mogendorff, 2017). According to Fredwall et al. (2019), this incompatibility has a potential of causing a reduction in efficiency, early fatigue, and cervical, backbone and lumbar pain. Furthermore, it can be responsible for postural disorders such as scoliosis and lordosis after long-term use. This is also in line with Uche & Okata (2015) and Pritchard (2021) findings that the furniture provided in learning environments should be ergonomically and anthropometrically designed to accommodate all users.

Adherence to social justice and universal design are critical for inclusive education, which acknowledges the needs of all users regardless of their size and height. Likewise, they are central to both anthropometric and ergonomic principles. This study found that equitable use is highly disregarded in this institution, which has an adverse impact on students with short body stature.

Discomfort

Rigidity in the learning environment or tools denies students access and cause unnecessary frustration. Infrastructure and facilities that are not inclusive and flexible to all users make students dependent, reducing their self-confidence and self-esteem. Facilities should be flexible to accommodate the diverse needs of users, especially in public spaces like in HEIs. Queen and Joy did not appear to fit in any space in their learning environment, and that created frustration and a feeling of being a misfit. Queen stated:

> *"The learning environment is quite frustrating for me. There is no space where I fit comfortably. I do not know how many times in a day I ask for assistance from others simply because I cannot reach something."*

Joy further explained:

> *"You know as students; it is not always nice to sit on the front row. However, for us, it's different. We do not have a choice but to sit there. It means you need to rush to class for you to get that front seat. Otherwise, it is a struggle to see the board and the lecturer… view is blocked".*

The furniture design does not accommodate students with dwarfism, causing discomfort and embarrassment. People with short stature experience such feelings not only in HEIs but even in supermarkets or public spaces, as discussed by Pritchard (2016).

Queen still remembers an awkward experience that took place in her learning environment.

> *"I once fell off from a highchair in the library by the newspaper section while I was trying to sit properly; I was very embarrassed".*

Their learning environment not only makes them feel excluded, but it is also harmful to their health, and these circumstances have an impact on their academic performance. Joy mentioned that she used to skip classes because she felt so uncomfortable.

> *"It is even worse to attend three classes in a row. Our classroom seats are high for my height and they are slippery. My feet hang and they get swollen after sometime, My feet normally feel numb after hanging at least for three hours. That is why I cannot attend many classes in a day".*

Furthermore, Joy is concerned that infrastructure challenges are almost everywhere; there is no space within the campus where she finds herself completely comfortable. Students with dwarfism constantly need to make an effort for them to get access.

> *"A simple thing like opening a door is often a problem more especially with load shedding [1] because the automated doors do not work when there is no electricity. Then you need to push them very hard because they are heavy. Even where we need to swipe our student cards, it is way up there... Think of notice boards: they are all up there! I rely on others to read [notices] to me. This takes away my freedom and it is not nice to rely on other people all the time."*

They encounter similar challenges in residence. Queen said:

> *"To survive in a residence, one has to rely on friends and roommates for many things, like opening a window. I cannot reach the windows... I remember one evening it was raining, and I had to ask someone to come and close the windows for me. It is not nice to be so dependent."*

It is unacceptable to put students in such state where their dignity is compromised. This could even affect their self-confidence as well as academic performance. Research in the current HEI environment suggests that many university buildings and teaching and learning facilities do not meet ergonomic standards, especially for people of extreme body sizes (Pritchard, 2021). Physical facilities and furniture are frequently designed with the ergonomic principle of an 'averaged-sized person' in mind (Uche & Okata, 2015; Pritchard, 2021). Ergonomic considerations should be the determiners in the design of buildings and facilities as they impact the level of comfort that educators and students of all body sizes and abilities experience in their quest to achieve their educational objectives. The appropriate posture design of chairs and desks (or any facilities in public spaces) is important in achieving inclusive education.

The design of furniture should thus consider anthropometry, which refers to the dimensions of the body in terms of body size, shape, strength and capacity (Uche & Okata, 2015; Parvez et al., 2018).

Inappropriate size and space causes dependence

Universities are not only social spaces, but also knowledge spaces with the potential to develop and transform people's lives. They are competitive educational organisations that facilitate the attainment of qualifications that can lead to financial independence (Parvez et al., 2018; Rutherford, 2015; Pritchard, 2016; Nyamupangedengu, 2017). According to Sabbagh (2016), for universities to be "just learning spaces," distributive justice must prevail. Minority and disadvantaged groups qualify for fair and equal access to resources

[1] In South African context, load shedding is an energy utility method of reducing demand on the energy generation system by temporarily switching off the distribution of energy to certain geographical areas.

and success. Discussions about spatial accessibility and inclusivity are incomplete unless universal design is part of them. Similarly, social justice and social inclusion may not prevail if such facilities are not universally designed.

However, the inappropriate and unfriendly learning environment of this institution has made these participants reconsider their class attendance. Queen opted for evening classes to ameliorate the situation, which was affecting her health.

> *"Since I am a third-year student, I decided to shift to evening classes, which comprise two lessons from 16:30 to 20:30; this is much better than the day classes that commence from 8:20 to 14:20. Assessment time has its own challenges. Most papers are 2 hours long and 3 hours for examination. By the end of the paper, my feet are solen due to hanging for a long time."*

Paying attention and fully participating in class is not easy. Joy also narrated that a simple activity like taking notes in class becomes a challenge:

> *"The space in between the seat and the tabletop is too wide for me to reach. After sitting for some time, my lower back and spine become painful. If I lean back, I cannot reach the top of the table. This means that when I write, it is better to hold my writing pad on my lap rather than put it on the table. Nothing is easy or comfortable in class. Therefore, paying attention to the lecturer is not easy because I spend most of the time adjusting my sitting position. My academic work is affected."*

Due to challenges in their learning spaces, students with disabilities are becoming techno savvy and gaining confidence with technology. Queen alluded to the difficulties in the library and prefers online material:

> *"The main challenge in the library is the height of the bookshelves. It means I must always have someone to assist me. That part is annoying, and it takes away my independence. I am learning to rely on e-material."*

Such experiences make learning less enjoyable when they need to exert extra effort to access facilities, whereas according to the UD principles, there must be a low level of physical effort in accessing facilities. Students' performance may be adversely impacted and make them feel left behind when HEIs' infrastructure and facilities do not comply with the principles of UD as well as Rawls social justice. Universities are obligated to offer inclusive education, high-quality instruction, appropriate curriculum design, a welcoming and conducive learning environment, and appropriate assessments to meet the diverse needs of students (UNESCO-IESALC, 2020; Dalton et al., 2019; Department of Higher Education, 2018).

Preference of online learning

The study also found that there seems to be positive gesture towards online learning as the students do not need to be in contact with other students or with the frustrating infrastructure. COVID-19 introduced online learning, which was not easy to adapt due to several issues including data availability, network, compatible devices and assistive devices (Hanjarwati & Suprihatiningrum, 2020). Due to the infrastructure and resources available on campus, students with impairments preferred face-to-face learning (Duma & Chamane, 2023; Meda & Waghid, 2022). In contrast, this study discovered that students of short stature prefer online learning due to their learning environment's hostile and inadequately planned facilities and infrastructure.

COVID-19 gave students with short stature a relief from stigmatisation and frustration of attending face-to-face classes. Both students, Queen and Joy, are happy with online classes.

> *"I was very happy with online classes during COVID as there was no unnecessary attention on me. I attended online classes like any other student. I hope the university continues with this mode of conducting classes."*

In many instances, universities opt for designs that suit their budget and by so doing compromise the diverse needs of the users (Mutanga, 2017). Current theories and technologies require that teaching and learning environments should not only be comfortable, but also meet the physical and health needs of the users (Uche & Okata, 2015). The challenges of access are well captured by Nyamupangedengu (2017, p. 114), who argues:

The main educational challenge in these circumstances is not the diversity of the student body, [but] rather the failure by institutions and individuals to factor the standard teaching and learning process to the realities of the great majority of the current student body.

The general findings of this study discovered that the distributive justice and UD principles of equitable use, flexibility in use, low level physical effort as well as appropriateness and space for approach and use are highly compromised in this institution. Therefore, students with short body stature have limited access to their learning environment. This has an adverse impact on students' academic performance, self-confidence, and health. The non-compliance of HEIs with many of the policies on disabilities promulgated at national and international levels as well as their own (individual university policies) should come with a hefty penalty (Matshedisho, 2010).

Whilst punitive measure needs to be taken, the financial state of the institution could be limiting. According to Stanczak et al. (2023), compliance with UD principles and retributive justice are mandatory. Still, the actual application could be difficult, as universities may not have the financial muscles to create the enabling teaching and learning environment. For instance, this university is one of the previously disadvantaged universities located in the peripheries of the city and serving disadvantaged communities. Implementation of universal design and social justice-aligned learning spaces could be a challenge due to government-dwindling funding (Universities South Africa, 2017).

CONCLUSIONS

Issues of inclusivity and accessibility in public spaces as well as in higher education institutions remain critically important in making such places user-friendly and providing efficient services.

There should be no point where students feel their body stature is not acceptable in any learning environment. The social justice theory and UD principles have been used to understand the equitable allocation of learning spaces and facilities in an educational institution, as they underscore the necessity for inclusive and quality education as well as equality for minority groups.

HEIs should avoid ableism (Dolmage, 2017), which occurs when equity is implemented blindly and may not adequately address the diverse needs of students with rare disabilities. Many public spaces are wheelchair accessible but not body or height accessible. Transformation would be possible if social justice and universal design were treated as two sides of the same coin, and then inclusive education in HEIs would become a reality. Quality education has many implications, such as equal access to learning institutions and conducive learning environments where didactical and pedagogical principles favour the needs of diverse students.

HEIs should also realize that social justice and universal design principles, which guarantee that no student is left behind, can be used to achieve epistemic access, inclusivity, and equity. Since ubuntu fosters interpersonal caring, it is imperative that these values permeate HEIs. Any delay in engaging with dwarfism within the HEIs sphere may have dire consequences for improving epistemic access and success for students with

dwarfism. Open dialogue, consultation, and feedback with the primary users should be taken into consideration in drawing improvement plans. It would be beneficial for all students to use facilities that are appropriately designed for any size, space, and use. Further investigation into public space design for individuals with extreme body stature could help to eradicate some of the obstacles and discrimination.

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