Bottlenecks to Inclusive Higher Education for Students with Disabilities during the COVID-19 Pandemic in Tanzania

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ABSTRACT
This study explored the bottlenecks to the inclusive higher education for students with disabilities (SWD) during the COVID-19 pandemic in Tanzania and ways proposed to overcome them. The study used a qualitative approach that was informed by the phenomenological and multiple holistic case study design. A total of 158 research participants from four higher learning institutions in Tanzania were involved. They included 28 academic staff and 28 wardens who were selected through simple random selection. Others were 4 deans of students, 80 students with disabilities, 2 students’ leaders with disabilities, 8 personal assistants of students with physical impairments, and 8 heads of academic departments (these were purposively selected). The sample size was, however, determined by the point of saturation. Data were collected through interviews, focus group discussion (FGD), and direct observation where thematic analysis was used for data analysis. The findings revealed that allocation of rooms without consideration to SWDs and their personal assistants, difficulties in accessing information, unhygienic hostels, mobility difficulties, difficulties in access to preventive facilities and inadequate counselling services were part of the bottlenecks to inclusive higher education among SWD during COVID-19. The paper suggests ways to overcome the bottlenecks to inclusive education such as allocating rooms for SWDs and their assistants, improvement of infrastructures, orientation on mobility, and purchasing facilities and equipment which improve hygiene within inclusive education. It is recommended in this paper that the universities should establish units and resource centres well furnished with necessary equipment for students with disabilities which will be responsible for all matters related to SWDs.

Keywords: Bottlenecks, inclusive higher education, COVID-19 pandemic, students with disabilities
INTRODUCTION
The past two decades have witnessed developments in higher education (Marginson, 2016) in response to rapid increase in the demand for higher education (Giannakis & Bullivant, 2015; Mok & Neubauer, 2015; Powell & Solga, 2011; Scott, 2005). Despite the growing social demand for higher education, there are still several bottlenecks in access and participation of students with disabilities, thus calling for the need to embrace inclusive education. Inclusive education (IE) refers to educating students with special education needs (SEN) in a regular education setting (Mitchell, 2015). It can broadly be conceptualised as the formation of enabling learning spaces that are concerned with diverse educational needs for all regardless of race, social economic background, gender, disability and so on (Ainscow & Cesar, 2006; Armstrong, Armstrong & Spandagou, 2011). This paper focuses on barriers to inclusion of higher education students with disabilities during COVID-19 pandemic in Tanzania and ways used to overcome. The government of Tanzania has overtime endeavoured to make sure that access to education is widened to all children. Its commitment to ensuring access to education for students with disabilities is expressed in various international, national and regional instruments and protocols to which the country has subscribed and ratified.

These instruments include the Universal Declaration of Human Rights (Article 26) (UN, 1948); the International Covenant on Economic, Social and Cultural Rights (UN, 1966); the Convention on the Rights of the Child (UN 1989); and the Convention on the Elimination of All Forms of Discrimination against Women (UN, 1979). Others are the Convention on the Rights of Persons with Disabilities (UN, 2006); the Convention against Discrimination in Education especially article number 4 (UNESCO, 1960); the African Charter on the Rights and Welfare of the Child (Article 11) of 1990; and the African Youth Charter (Articles 13 and 16) of 2013 (Right to Education Project, 2014). Tanzania’s efforts to pledge widening of education access are further informed by the 1990 World Conference on Education for All (UNESCO, 1990), the Dakar Framework for Action (DFA) (UNESCO, 2000), the Millennium Development Goals (MDG) and further refined in the Sustainable Development Goals (SDGs). Likewise, the Salamanca proclamation and Framework for Action on Education of people with disabilities urge all governments to provide education to all, including those with special needs. It stipulates that those with special needs must have access to regular schools. These
goals required countries to implement strategies for ensuring access to quality education for all children (UNESCO, 1994). A critical review of the history and development of special needs education reveals that in the two decades before 1981, there was no clear policy for people with disability. Although the Arusha Declaration of 1967 clearly stated equality to all people, it was until 1981 in the proclamation of the International Year of Disabled People (IYDP) that the government of Tanzania began to take serious measures (URT, 2004). In a bid to implement EFA goals, the government of Tanzania passed different acts and policies for people with disabilities including Act No.3 of 1982 on Disabled Persons Care and Maintenance (URT, 1982). The formulation of the National Policy on Disability (NPD) in 2004 was another landmark towards the recognition of the rights of people with disabilities by providing guiding principles and setting parameters for service delivery to students with disabilities (URT, 2004). In 2008, Tanzania embarked on an inclusive education programme and came up with a National Strategy for Inclusive Education (NSIE) to cater for 2009 -2017. The NSIE outlined deliberate areas of accomplishment from the existing education sector policies and programmes that needed to be reinforced and consolidated to provide access to quality education to all children with an emphasis on children with disabilities (URT, 2017).

It was insisted all education policies and programmes to embrace inclusive standards and practices. The teaching and learning needed to consider and accommodate the diverse needs of learners; to build professional capabilities for inclusive education and to enhance community ownership and participation in inclusive education. Research on inclusive education has been dedicated on lower levels of education. Consequently, a large number of studies have focused on analysing the inclusion of students with special educational needs at the childhood, primary, and secondary education levels (Friskawati, et al., 2021; Holahan & Costenbader, 2002; Kavale & Forness, 2000 ). Considering that inclusive education at higher learning is the key segment that guarantees the development potential of all students (UNESCO, 2009), a study of bottlenecks to inclusivity in higher education is crucial. Additionally, the education system in Tanzania, similarly to many other educational systems globally, was drastically affected by the COVID-19 pandemic. Globally, a variety of measures were taken such asclosure of the schools, colleges and universities. To that effect, a paradigm shift of teaching and learning entailing online in addition to the traditional face to
face mode emerged. Teaching and learning thus began utilising digital technology and global classrooms supported by various media including Google meetings, Zoom, WhatsApp, and so forth (Friskawati, et al., 2021). However, in Tanzania, due to several reasons including poor connectivity, poor electricity and low preparedness of institutions, lecturers and students; the situation was worse. For students with disabilities, the situation was even worse (Seni, 2022). This study explored the bottlenecks to inclusive education among higher education students with disabilities during the COVID-19 in Tanzania and the ways proposed to overcome them. Specifically, the study was carried out with the following objectives:

i. To explore the bottlenecks to inclusive higher education for students with disabilities during COVID-19 pandemic in Tanzania.

ii. To identify ways to overcome the bottlenecks to inclusive education among higher education students with disabilities during pandemic like COVID-19 in Tanzania.

**Theoretical Underpinnings**

This study was framed under the ecological system theory by an American psychologist Urie Bronfenbrenner. The theory was put forward in 1974 (Bronfenbrenner, 1974). The theory views child development as a multifaceted system of relationships affected by multiple levels of the surrounding environment from immediate settings of family and school to broad cultural values, laws, and customs. To study a child’s development then, we must look not only at the child and her immediate environment but also at the interaction of the larger environment as well. Bronfenbrenner divided the person’s environment into five different systems: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem. The microsystem is the most influential level of the ecological systems theory. This is the most immediate environmental setting containing the developing child such as family and school. Bronfenbrenner’s ecological systems theory has implications for educational practice. The ecological system theory is relevant to this study since it guides how learning in an inclusive setting was affected by COVID-19 outbreak. The idea of the role of social environment in the development of the child with a disability has also been put forward by the Russian scientist Kaschenko (1870-1943) who contends that educational programmes and trainings should be adapted to children rather than children adapting to the programmes and training. The relevance and utility of the
Ecological Systems Theory (EST) is based on its ability to guide our understanding of students’ relationships with their multiple contexts such as home, community, and educational environments. In this case, the EST provides a more comprehensive understanding of students with disabilities and appreciates that a number of aspects shape their university experiences, development, and outcomes. The theory guides us to examine students in their educational contexts (Renn, 2003; Renn & Arnold, 2003). In his view, education should take into account the characteristics of each child and that any back-breaking demands will cause negative scenarios to a child’s development in terms of abilities and inclinations which are likely to be unused or undeveloped. Within the context of this study, an inclusive education could thus be regarded as a model that proposes an environment and arrangement in which all students can learn, participate and are welcomed as valuable members of higher learning institutions (Ainscow, 1998; Sapon-Shevin, 2003). Thus, the ecological system theory that brings about socially-centred approach (McGibbon, 2012) and the physical environment is a crucial framework for the consideration of inclusivity in higher education. Though the theory was initially framed for children, it is deemed relevant to study adult learners in higher learning institutions as it emphasizes the environment in which the learner is surrounded with.

**Bottlenecks to Inclusive Education**

Empirical studies have highlighted a number of bottlenecks to inclusivity resulting from COVID-19 globally and in the local context. In the Pacific, a lack of inclusive education policy at the school level and a lack of proper facilities to support the learning of children with disabilities were cited as barriers to inclusive education. Furthermore, the lack of proper classroom sanitation, ramps, playgrounds, signs on buildings as well as teachers’, students’ and parents’ negative attitudes are other bottlenecks to inclusivity (Sharma, et al., 2018). Likewise, the teachers’ workload due to large classes and shortage of teachers are other barriers to inclusive education in Bangladesh (Runa, et al., 2022). Süt and Öznaçar (2017) researched the impacts of pandemic on education and revealed that social distancing and isolation were important remedies to consider for protecting the people from the pandemic. During COVID-19, the institutions of higher learning were banned to gather students and lecture through face-to-face mode. Consequently, the delivery of courses and activities of learning were interfered. The little consideration of parents for online learning made it more complex for the lecturers to provide online learning to students with disabilities.
Zdravkova and Krasniqi (2021) contend that the COVID-19 pandemic resulted into an abrupt shift towards online teaching, learning and assessment, which was troublesome for teachers and students. The most troubled people were students with various disabilities, whose inclusive options were no longer available at home where they were forced to go as a result of the lockdown and the closure of schools, colleges and universities. A review of the literature reveals a number of bottlenecks resulting from COVID-19 for people with disabilities. They include inadequate fiscal resources, food insecurity, increased violence for women and girls, low access to public health information, and difficulties in accessing regular health care, assistive devices and rehabilitation, as well as personal protective equipment (PPE) and hand sanitiser (Hillgrove, 2020). In Nigeria, inclusive education is hampered by a mismatch between policy and practice, a lack of an accessible environment, a lack of funding, and a shortage of teachers with basic skills in special needs education, as well as cultural constraints (Sambo & Gambo, 2015). Some schools are less accessible to physically impaired students using wheelchairs because of the absence of elevators, ramps as well as paved pathways. Likewise, an enormous body of literature on inclusive education has focused on the attitudes of parents, teachers, ‘non-disabled’ peers and sometimes disabled children and adults themselves (Van Kraayenoord, 2007).

Such studies also include Mdikana et al. (2007) who examined the attitudes of student teachers in Johannesburg towards the inclusive education of learners with special educational needs. Similarly, Kuyini and Desai’s (2007) and Ocloo and Subbey’s (2008) research in Ghana studied teachers’ attitudes towards inclusive education. Other bottlenecks experienced by students with disabilities in higher learning institutions are concerned with accommodations. A study by Lyman et al. (2016), in the United Kingdom, focused on the reasons that students with disabilities denied accommodations. It was found that students with disabilities denied to use accommodations set aside for them because they did not want to be a burden. Hong (2015) acknowledged accommodations as one of the many bottlenecks faced by students with disabilities within the higher education environment. Across the literature, there was a great deal of variation regarding what constituted a barrier. Generally, the research identified barriers to knowledge, function, or attitude. For example, Lyman et al. (2016) treated students’ lack of knowledge about disability support services on campus as a barrier to accommodation. Swaziland, as it is in many parts of Africa, people with
Disabilities are prone to encounter dreadful situations in terms of stigma and segregation due to negative beliefs, norms, traditions and cultural aspects. All of these render them to appear as objects, scorn and victims of all sorts (Ndlovu, 2016). In the context of pandemics such as COVID-19, stigmatization and marginalisation of people with disabilities were accelerated since each person was worried about interactions. Sonn et al., (2021) studied the success and challenges for higher education during the COVID-19 pandemic in South African higher education institutions. They point out that the shutdown of normal operations interfered with key activities such as face-to-face teaching and learning. The transition to online teaching and learning during the lockdown conversely led to uncertainty about the academic future for all students and much so for SWDs. Additional costs and expenses were added to SWDs, staff and other students. Transition to online teaching and learning caused postgraduate student dissertations and thesis writing to come to a brief standstill; Students were concerned that this would delay their completion process. Many research projects were suspended or terminated due to the national lockdown regulations.

In Kenya, Eunice et al (2015) assert that there are particular bottlenecks in negative attitudes and behaviour among educators and parents regarding the skills of children with disabilities to be taught. Another major challenge to inclusive education in the Republic of Kenya is the lack of funding. Teaching children with disabilities in general education classrooms takes specialists and additional classrooms to support student needs. Coordinating services and offering individual support to children requires additional money that many schools do not have, particularly in a tight economy (UNESCO, 2009). Therefore, inadequate funding can hinder ongoing professional development that would help keep specialists and classroom teachers updated on the best practices. However, Cortiella (2009) asserts that a major constraint is a serious shortage of educational resources (a lack of schools, inadequate facilities, shortage of professionally trained qualified staff, and shortage of modern learning/instructional materials). Again, policymakers who do not understand the concept of inclusive education can be a barrier to the implementation of this wonderful aspect of education (Ainscow & Booth, 2005). Bhat and Geelani (2017) researched issues, challenges and prospects of inclusive education in India. They assert that issues in an inclusive context entail low student enrolment, lack of competencies among teachers to successfully implement inclusive education, and large class sizes which are hindrances to the students with special needs to benefit in the
mainstream classrooms. Other challenges entail an inflexible curriculum which does not permit students with special needs to benefit equally to those without special needs, negative attitudes of parents and teachers as well as inadequate infrastructure and a lack of assistive devices. Likewise, the absence of political will towards the execution of inclusive education is one of the bottlenecks that impairs the realisation of the dream of inclusive education in a practical manner. In Tanzania, Ngusa and Joseph (2017) studied inclusivity education in public secondary schools. They found that teachers and students were ready for inclusive education and held positive attitudes towards students with disability. However, there was an acute shortage of braille for the blind; also, the school grounds were not favourable for them to walk. In contrast, some other studies report the existence of negative attitudes towards students with disabilities (Mbwanbo, 2015; Possi & Millinga, 2017). These studies have indicated negative attitudes by teachers, peers, and community members to be one of the main bottlenecks towards the realisation of inclusive higher education among students with disabilities. Other bottlenecks highlighted refer to accommodation challenges. The culture of the school also played a major role in the implementation of inclusive education (Revelian, 2021).

Ways to Overcome the Bottlenecks to Inclusive Education
A study conducted in the Pacific by Sharma et al (2018) points out that all schools are supposed to have a policy catering to inclusive education and mainstream facilities that would support inclusive education (IE) in their budget. The provision of training on inclusive education to teachers through pre-service and in-service training is also recommended for the inclusivity of the schools. The necessity to raise awareness of inclusive education to various stakeholders is pertinent. The achievement of the inclusion process relies on diverse factors including the qualification and ability of the teachers (Toomsalu et al., 2019; Ovcharenko et al., 2021) and their attitudes toward inclusivity (Leyser & Tappendorf, 2001). A substantial literature on inclusive education (Mugambi, 2017; Ajuwon, 2008) recommends the mobilisation of stakeholders on the right to education for everybody, and having additional governmental reforms to support inclusive education. Critically speaking, having impressive policies, legislations and Acts may not be sufficient if they were not put into practice. Eunice et al (2015) point out that challenges to inclusive education can be dealt with by conscientising communities on human rights and inclusive education. Other
ways entail supporting people with disabilities to air their views and take part in planning and promoting action research and disability-responsive pedagogy to teachers (Croft, 2010). This is to say, we can be able to reduce barriers to inclusive education by effectively engaging people with disabilities in the quest for a solution. In India, Bhat and Geelani (2017) recommend the necessity to encourage the complete involvement of people with disabilities and families in the formulation of policies and guidelines. This will enhance the inclusiveness of people with disabilities in education.

Synthesis and Gaps
Based on the empirical literature reviewed, it can be indicated that students with disabilities encounter various bottlenecks to inclusivity in higher education which are extremely significant. However, there is a paucity of research on the bottlenecks to inclusive higher education. There are also scanty studies linked to the inclusiveness of students with disabilities in higher learning institutions during the situation of COVID-19. The purpose of this study, thus, was to explore the bottlenecks to inclusive education among higher education students with disabilities during COVID-19 in Tanzania. It also sought to identify ways of overcoming the bottlenecks to the inclusivity of students with disabilities in Tanzanian higher education institutions.

Methodology
Design
This study was informed by a qualitative research approach, phenomenological and multiple holistic case study design. To that effect, in-depth data information from the four sampled schools was wholistically regarded i.e. multiple holistic (Msoroka, 2018; Yin, 2014). In realising the study objectives, data were collected from four Tanzanian higher learning institutions. The inclusion of a mix of public and private universities was important to ease a deeper understanding of the pertinent matters under enquiry.

Sample Size and Sampling Techniques
Students with visual impairment, hearing impairment, Autism, down syndrome, behavioural disorders, cognitive disorder and physical impairment were purposively sampled. Deans of Students, HoDs, Personal Assistants of students with physical disabilities, and (students’ leaders) representatives of students with
disabilities were also purposively sampled. Wardens and academic staff were randomly selected from their respective departments. The sample size was eventually reached after arriving at saturation point whereby the responses provided were repeated.

### Table 1: Sample Size

<table>
<thead>
<tr>
<th>Category of Participants</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic staff</td>
<td>16</td>
<td>12</td>
<td>28</td>
</tr>
<tr>
<td>Deans of students</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Wardens</td>
<td>12</td>
<td>16</td>
<td>28</td>
</tr>
<tr>
<td>SWD</td>
<td>40</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>Students leaders SWD</td>
<td>2</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Personal Assistants of SWD</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>HoDs</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>80</td>
<td>78</td>
<td>158</td>
</tr>
</tbody>
</table>

Source: Field Data

### Data Collection and Analysis

Before the data collection process, the researcher sought permission from the Regional Administrative Secretaries (RASs) of the regions where the study was conducted. Consent forms were developed and offered to the aforesaid respondents before data collection. (Cresswell, 2007; Bailey, Hennink, & Hutter, 2011). Data from students with disabilities, wardens, and academic staff were collected through FGDs. Interviews were used to tap information from HoDs, Personal Assistants of students with disabilities, and student leaders, particularly representatives of students with disabilities. All interview sessions lasted for 30 minutes; each interview session was audio recorded in the national language (Kiswahili) and translated into English. The interview and FGDs sessions took place in areas where participants felt comfortable and all data were regarded as confidential. Thematic analysis was adopted to analyze data abiding to three main steps namely preparing and organizing the data right from the field, creating the themes, and coding (Ezzy, 2002). Themes were inductively generated as findings emerged from the field and verification of themes was achieved by re-reading the transcripts and associating them with the data collected in notebooks. The analysis was preceded by listening to audio records of interview and FGD sessions to familiarise and become conversant with the data and then a verbatim transcription of the interview and FGD sessions was made. In this paper,
Findings
This study explored the bottlenecks to inclusive higher education for students with disabilities during COVID-19 pandemic in Tanzania. It also identified ways to overcome the bottlenecks. The subsequent section presents the findings as per respective research objectives.

Bottlenecks to Inclusive Education during COVID-19
The study revealed a number of bottlenecks to inclusive education among higher education students during COVID-19 as presented in the following sections.

Difficulties in Accessing Information
The findings revealed that SWDs had difficulties in accessing information related to COVID-19 which made them lack information on how to prevent the pandemic including sanitation measures, wearing of the masks and social distancing. Responding to an interview question regarding the challenges encountered by SWDs during COVID-19, one of the participant students with hearing impairment said:

*It was difficult for me as deaf to access information on COVID-19 as it was not provided using sign language. We relied on imitation of what others were doing to protect themselves from catching the disease (Student G).*

Likewise, students with intellectual impairments such as those with Autism, down syndrome, behavioural disorders and cognitive disorder had difficulties to process, interpret and restore massive information they received regarding COVID-19, thus making it difficult for them to observe restrictions, directives and protocols related with the pandemic. They, thus, proceeded with their daily routines as if there was no disease. It was difficult to handle and monitor their movement, hence becoming more vulnerable to contact COVID-19. Explaining this experience, one of the interviewed academic staff commented:

*Students with behavioural disorder and those who are addicted to alcohol, smoking, or sex were difficult to control their movement. We advised students to avoid movement. However, as it was happening, one might go to town in search of things which were unnecessary thus becoming vulnerable to COVID-19 (Academic Staff H).*
Though such problems were present even before COVID-19, they exposed SWDs to more vulnerable conditions and prone to catch the pandemic. Another bottleneck revealed was poor access to information on COVID-19. Due to the presence of the pandemic, students minimized interactions which could be a source of information. There were bottlenecks which applied to all types of disabilities while others were specific to certain kinds of disabilities. Explaining the bottlenecks to the inclusivity of SWDs, one of the participant wardens said:

*Students with social and emotional disorders lacked social skills and pertinent information. As a result of not mingling with their fellow students, they lacked sufficient information on COVID-19 the situation which exposed them to the dangers of being infected. This was also the case with students with language and communication disorders (Warden G).*

Based on the study findings, it could be argued that difficulties in accessing information about COVID-19 varied based on categories of disabilities. Thus, some students were more prone to lack important information regarding COVID-19. This, arguably, exposed them to the pandemic more than their counterparts with a certain disability and those without disabilities.

**Challenges Associated with Students’ Hostels and Hygiene**

Despite the efforts by universities to address the needs of SWD, several challenges were identified in students’ hostels that made hygiene and life of SWD difficult. First, the toilets were situated far from their rooms. Most of the toilets for SWD were misused. In this case, one of the interviewed deans of students intimated:

*Some toilets for SWD were used as storage facilities for cleaning materials by cleaning companies; some were used by wardens and security guards and were locked most of the time. Moreover, toilets were not well cleaned and there was inadequate water supply in most hostels which made toilet usage for people with disabilities more challenging (Dean of Students B).*

It was also observed that some of the toilets for students with disabilities did not have facilities that could support students with disabilities. For example, not all toilets for students with disabilities had grab rails which are important for students with physical disabilities to support moving using their hands. Also, they had no low sinks that could be easily used by students with disabilities. Another challenge was associated with the allocation of rooms for students with disabilities. Through interviews with Deans of Students, it was found that there was no specific process, guideline or policy on how to allocate rooms for students with disabilities. The procedure depended on the will of the warden in charge. On
top of that, some students with disabilities were not allocated the same rooms with their assistants thereby making the task of supporting them in walking, reading notes and fetching water difficult. In situations where water supply was scarce and did not flow in tapes, one had to fetch water for himself or herself despite the disability he or she had. The complications to access water facilities compromised hygiene and exposed SWD to COVID-19. Some rooms for students with disabilities were observed to have been used as offices for hostel wardens. As a result, students with disabilities were allocated rooms that were not specially built for them. Some rooms for students with disabilities in some blocks were locked or used as stores. It could thus be said that accessibility to students’ hostels for students with disabilities was minimal. The narrow doors in some hostels for students who were using wheelchairs made their entrance difficult.

**Mobility Difficulties**
Observation revealed that some buildings had ramps and were constructed without rails for physically impaired students to walk without problems. Moreover, as students and the general public were urged to observe social distancing, the fear of COVID-19 by personal assistants made some keep their distance from the SWDs they were guiding in walking. Since ramps were mostly at entrances and did not connect to pavement systems within the universities, consequently, students who were using wheelchairs and others with mobility challenges found it difficult to move from one point to the other in the absence of personal assistants due to widespread fear of COVID-19. The lack of pavements connecting students’ hostels to other buildings such as lecture theatres and staff offices, and a lack of personal assistants made the mobility of students with disabilities difficult. Through observation, it was noted that there was a lack of bridges to facilitate the movement of students including those with disability.

**Difficulties in Accessing Facilities and Services**
In this study, it was found that SWDs had difficulties accessing preventive facilities such as sanitisers and face masks. During interviews with academic staff informants, one of them revealed that:

> SWDS had problems accessing various preventive facilities. For instance, students with visual impairment could not see where the sanitisers were placed. Sanitisers (water, bucket, tap, and liquid soap) were publically located for all students to access. The distance to the point at which sanitisers were placed and infrastructures which were not supportive of the movements of
visually impaired people and physically impaired students made it difficult for them to access the sanitisers, and thus become prone to COVID-19 infections (Academic Staff E).

Additionally, visually impaired students relied on touching to identify an item such as a mask, sanitiser, soap, and so on. In this regard, one of the interviewed academic staff revealed that:

Since SWD had to touch several times to identify an item such as a door or facility such as sanitiser and soap, the chances for contamination and COVID-19 infection increased. One had to touch the mortice lock more than once to open the door; thus, increasing the chances of infections (Academic Staff D).

The physically impaired students were observed to have difficulties in operating the sanitiser machines as some had no arms, or legs to walk and stand up, or some fingers with which to touch the sanitiser machine. Despite the efforts made by universities to address the needs of SWD, the inclusivity of students with disabilities donot correspond to their needs. An interview with one of the Heads of Departments revealed that he had only one (1) transcriber for 35 students with visual impairments, and only one (1) sign language interpreter to serve the requirements of 21 students with hearing impairments. This caused SWDs to make frequent follow up to get the subject notes suitable for their type and level of disability, all of which maximized interaction contrary to the COVID-19 protocols of maintaining social distance and avoiding unnecessary movements. It was also found that a lack of awareness on issues related to disabilities and inclusion among students and staff members caused difficulties for SWD to access some services. On this particular aspect, one of the participant students stated:

Some staff members at our University are not aware of disability and inclusive education. Thus, SWD fails to access services such as signing loan allocation forms timely as they are left to queue like others. This is particularly so since some disabilities such as deafness are hard to recognise (Student A).

As for students with albinism, some sanitisers were harmful to their skin and thus acted as a challenge to their health. This was a challenge since the use of sanitisers could have been detrimental to the health of their skin but non-use of them could make them vulnerable to COVID-19. The study also found short of counselling services for students with disabilities in universities. One of the interviewed HoD said:
The University has not employed professional counsellors to serve SWD. Instead, the task has been left to wardens and academic advisers who are not professional counsellors (HoD C).

It was suggested by participants that there should be inclusive education units which could conduct counselling to students on different matters such as health, social, academic, technological issues and so forth. Furthermore, the study found that there were no resource centres for students with a disability that could house all equipment for teaching students specializing in special needs, those having disabilities and those for inclusive education. The findings from FGD with academic staff revealed that Universities had inadequate facilities and equipment for students with disabilities. This included Perkins Braille machines, Embossers, Close Circuit Television (CCTV), A 4 slate and stylus, Abacus, Laptops with talking programmes and Desktop computers for students with visual impairment (VI). There was also a lack of equipment for teaching students specialising in hearing impairment (HI) such as video cameras, Audiometers, hearing aids, otoscopes, bone conductor vibrators, soundproof booths, audiogram papers and sign language dictionaries.

Academic Challenges

Data emerging from the FGDs with academic staff revealed a number of academic concerns for SWD. There is a lack of awareness on matters related to disabilities and inclusivity of students with disabilities among members of university communities including academic staff, non-academic staff and students without disabilities. Lack of awareness has caused for example academic staff to fail to identify, give modified notes and assignments or handle other issues related to students with disabilities.

One of the academic staff shared the following during FGD:

> Some students (without disabilities) and academic and administrative staff lacked awareness about disability issues which made them fail to render the required help to SWDs. Some instructors fail to identify students with disabilities in their classrooms. Those who are able to identify SWD fail to modify their mode of teaching due to a lack of pedagogical skills to accommodate students with disabilities (Academic Staff C).

Consequently, most of the students with disabilities become just present in the class without effective learning. This is true for both students with hearing and visual impairment. It was revealed that students with visual impairment cannot
take notes due to their disability; some rely on recording lectures through their voice recorders or their phone while students with hearing impairments rely mostly on lecturers’ notes. Some lecturers neither allowed students to record lectures nor provided notes to students, thus making learning difficult among SWD. Despite the fact that students with disabilities (in some universities) are set in a special room, given large font examination question papers, given Braille machines and so on, the examination duration has always been a challenge. The addition of examination time as provided for by the National Examination Council of Tanzania (NECTA) has remained on the wish of invigilators as a specific guide and standard was lacking. The findings that there were still some bottlenecks that hampered the inclusivity of students with disabilities in higher learning institutions in the country are inconsistent with policy pronouncements and the NSIE. The findings indicated that the lack of internet access and “useful” devices served as a barrier to learning. When schools closed during COVID-19, many countries turned to online or blended learning models to support their students. Without access to the necessary devices or adequate internet connectivity to engage in online learning activities, learning inequalities are likely to widen for learners with disabilities.

As a person with disabilities from University A said:

> At the moment, I am not able to access reading materials. My parents do not have access to the internet, laptops and smartphones. As a learner with disabilities, I have stopped learning at this time of University closure.

Based on the findings, it is argued here that ICT inaccessibility and the digital divide implicitly widened the gaps on the grounds of one’s disabilities.

**Ways to Overcome the Bottlenecks to Inclusive Education**

Based on the study findings, a number of ways to overcome the bottlenecks to inclusive education among students with disabilities were pointed out. Though such ways are useful at all times, within the COVID-19 context are even crucial to observe so as to rescue SWD to double vulnerability.

**Allocate Hostel Rooms to SWDs with their Assistants**

It was suggested that higher education institutions that have less inclusive rooms should allocate each student with a disability a room with his or her assistant. SWDs such as physically impaired who could not walk and those with visual impairment require self-contained rooms. The need to build self-contained rooms
to cater to students with special needs was mentioned. One of the interviewed dean of students had the following to share:

Rooms for SWD need to have special toilets and self-contained ones; this is crucial for hygiene and security reasons. The sharing of toilets could be detrimental to SWD not only in the context of the COVID-19 pandemic but often (Dean of Students B).

Examining the data above, one would conclude that members of the university communities were uncomfortable with the modalities of allocating hostel rooms. Arguably, this contributed to the lack of inclusivity of students with disabilities in higher learning institutions.

**Improvement of Infrastructures to Enhance Mobility of SWDs**

Mobility issue is a critical concern for SWD especially those with visual impairment, hearing impairment and physical disabilities. To facilitate mobility for students with disabilities, wheelchairs, tricycles (Bajaj) and structures such as pavements that connect buildings were highlighted as important.

In this regard, one of the interviewed Deans of students commented:

Universities should provide wheelchairs and Bajaj to facilitate the movements of students with disabilities. These could be University owned or donated wheelchairs and Bajaj. Likewise, walkways and pavements should be roofed to protect SWDs from rainy and sunny effects. Furthermore, universities should have facilities for the identification of students with visual and hearing impairments (Dean of Students A).

Thus, it is argued here that there is a need for infrastructure improvements such as construction of ramps with rails to enhance mobility of students with disabilities. While facilities such as wheelchairs may be provided, it appears that infrastructure catering for students with disabilities are less prioritized calling for a need to revitalize the same.

**Orientation on Mobility**

The study participants suggested that there was a need to have an orientation on mobility for SWDs. It was noted that orienting SWDs on the university environment and how to move from one point to the other could help SWDs during COVID-19 as personal assistants kept their distance from them as a requirement for COVID-19. Responding to an interview question, one of the participant students with physical impairment said:
We face a challenge with mobility, but during COVID-19 it was worse as some of our assistants feared to interact with us; they avoided infections. Orientation on mobility to us could be a solution to this challenge and may relieve us from the guidance vacuum created between us and our assistants as a result of COVID-19 (Student B).

Another important way to overcome the bottleneck to inclusive higher education among students with disabilities has to do with changing attitudes and mindsets on disability issues by raising awareness of various stakeholders in higher learning institutions. Pedagogies of lecturing students with disabilities are also a challenge for inclusivity in higher learning institutions. One HoD noted:

There is a need to create more awareness within the higher learning institutions on disabilities, especially on accommodation of SWDs, Universal Design for Learning (UDL) to all lecturers and tutors. This will make their mindset positive and pro-students with disabilities (HoD C).

Based on the findings of this study, one can argue that lecturers who hold a positive attitude on disability issues and are acquainted with Universal Design for Learning (UDL) skills can deliver lectures to students with disabilities comfortably. Lectures without Universal Design for Learning (UDL) skills cannot lecture comfortably. This is to say that it is not a matter of attitude only but more so pre-requisite pedagogies.

**Purchase of Equipment to assess Disabilities**

It was recommended by the HoDs and academic staff that universities should have the equipment to facilitate effective teaching and learning of SWDs. One academic staff had the following to say:

To eliminate barriers to the inclusivity of SWDs in higher learning institutions, universities should have tape recorders, embossers, Perkins Braille and computers. Most of these facilities are for students with visual impairment. The need for having CCTV which helps students with low vision to read texts without help from another person was noted as crucial. Regarding hearing impairments, higher learning institutions should have soundproof rooms and audiometers, and employ or hire speech trainers. (Academic Staff C)

The findings on the need for purchasing various equipment, facilities and assistive devices for students with disabilities are obvious and sound. The bottlenecks to inclusivity of students with disabilities in higher learning institutions could be minimized if respective institutions and stakeholders prioritize procurement of the same.
Discussion
The study has revealed that COVID-19 pandemic adversely affected SWDs and that the kind and intensity of disability determined how a respective student was affected. Based on the study findings, a number of bottlenecks to inclusive higher education among students with disabilities have been established. In this case, while all students encountered challenges during COVID-19, the SWDs faced more critical challenges. The findings that some toilets for people with disabilities were within public toilets and used by anybody contradict the need for cleanliness which was highly emphasized during the COVID-19 (UNHCR, 2021). This suggests that the state of unhygienic toilets made SWD more vulnerable to COVID-19 infection. The study findings offer an avenue to rethink the link between policy pronouncements, national strategies and inclusive practices within higher learning institutions so that different support services for students with disabilities are in place. These include interpretation services, note-taking, reading services for blind students, personal assistants and identification services. In view of the findings, it is clear that there is a need for each student with hearing impairment to be assigned a note-taker. The note-takers who could be students at the respective higher learning institution may be remunerated.

For students with visual impairment, a reader to each student with visual impairment may be assigned as a personal assistant who could help him/her with movement and other needs as they arise. It is argued here that the higher learning institutions which employ Braille transcribers tend to be more inclusive than those without. The findings reveal the need to use personal assistants to the most needy categories of disabilities in this case those with severe physical and intellectual impairment. Those who are deaf-blind and have multiple disabilities seem to be the most needy. Over-reliance on using personal assistants may in the long run impair the need of making SWDs as much independent as possible. Likewise, the need for orienting SWDs on mobility arises as it will make them move without help from another person. This could arguably make SWDs independent which is acceptable under the principles of inclusive education. Overreliance on personal assistants could reinforce the concept of handicap. Efficient utilization of orientation and mobility skills enables visually impaired learners (VILs) to achieve better and accomplish their daily routines as independent individuals (Rosen & Joffee, 1999). While higher learning institutions’ management appears to have the willingness to make their institutions inclusive, a lack of skills in accommodating
SWDs by individual staff and students, negative attitudes and scarcity of funds collectively antagonize the rigorous move towards inclusivity of higher education. A harmony of all these forces and a change in the mindset of all stakeholders cannot be overemphasized. The findings that many students had no resources to make a swift and comprehensive shift to online teaching and learning impeded the possibility to achieve SDG 4 by 2030. This recognition of a digital divide advocates the need for a more inclusive approach when considering bottlenecks to educational access for vulnerable students, especially those with disabilities. While the utility of ICT was apparent in enhancing communication through emails, WhatsApp, and downloading and uploading lesson materials, it was coupled with a lack of and unreliable electricity, poor connectivity of the internet and incapability of some people to purchase internet bundles, especially SWDs (Seni, 2022). The findings that the physical and social environment was not yet fully inclusive to SWDs in higher learning institutions are akin to the ecological system theory which stresses the role of the environment in enhancing a conducive education system (Renn, 2003; Renn & Arnold, 2003). Thus, the education of SWDs was positively and negatively affected by the immediate as well as external environment.

Conclusions and Recommendations
Based on the findings, this paper concludes that despite the previous attempts to implement inclusive educational practices in higher education institutions in Tanzania, there are still bottlenecks that hamper the inclusivity of students with disabilities. These bottlenecks are mainly situated around difficulties in accessing information, challenges associated with students’ hostels especially allocating hostel rooms to students with disabilities without consideration of their assistants, and hygiene issues. Other challenges relate to mobility difficulties due to inaccessible roads, pathways and corridors. As for academic challenges, it is concluded that higher learning institutions are less inclusive due to a lack of pedagogical skills on inclusive education to most lecturers thus making teaching, learning and assessment coupled with less inclusivity. The paper concludes allocation of rooms to SWDs with their Assistants, Improvement of infrastructures to Enhance Mobility of SWDs, Orientation on Mobility and Purchase of equipment to assess Disabilities, assist effective inclusive learning as proposed ways to mitigate the challenges.
Based on the study findings and conclusions drawn thereof, the following recommendations are made to overcome the bottlenecks to inclusive education among higher education students with disabilities:

i. Higher learning institutions should establish units and resource centres well furnished with the necessary equipment for students with disabilities, which will be responsible for all matters related to SWDs.

ii. They should establish inclusive education policies that shall set standards on how inclusivity could be achieved in the presence or absence of pandemics such as COVID-19. Additionally, the Universities should develop different guidelines such as examination guidelines, teaching and learning guideline, accommodations guideline and registration guidelines which are responsive to the needs of SWD.

iii. Higher learning institutions should dedicate specific residential blocks that may accommodate SWDs. The residential blocks should be closer to services such as a cafeteria, library, seminar/lecture room and theatres. The residential blocks should meet the needs of SWDs. They should have wide doors, enhanced security, installed special toilets in rooms and if possible, the rooms of students with disabilities should be self-contained.

iv. Higher learning institutions should ensure that ramps and pavements within the University allow students with mobility challenges to move easily within the University.

v. Also, the universities should purchase white canes, wheelchairs and tricycles (Bajaj) to help students with mobility challenges.

vi. Higher learning institutions should make sure that all students’ hostels have reliable water and electricity supply. For blocks that will be accommodating SWDs, it is recommended that water tanks be installed to serve their rooms. Likewise, alternative power such as solar is desirable for hostels which will be set aside for SWD.

vii. Higher learning institutions should ensure that there are enough personnel to serve SWDs. This includes employing more Sign Language Interpreters, Braille transcribers and readers that will provide services to students with disabilities.
viii. Higher learning institutions should make sure that all its staff (non-academic and academic) and students (with and without disabilities) are sensitized on matters related to people with disabilities in order to elevate their responsiveness to disabilities issues.

ix. The need to focus on the attitudes of people toward disability issues within higher learning institutions is crucial. A positive attitude will consequently improve other areas such as teaching and learning, examination procedures, accommodation, registration of students with disabilities and so forth.
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