

Higher Education and Universal Design in Tanzania. A New Model of Inclusion and Sustainable Development

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Abstract. The need to create a more inclusive society in Tanzania is confronted with a discrepancy between the aims of a regulatory framework, aimed at making Higher Education spaces inclusive, and the question of the right of access to built environments, particularly in universities. The study presents the pilot case of the RUCU's Learning Center for Disabilities to demonstrate that the combination of UDL, architectural accessibility and international cooperation can give impetus to new research and application themes, creating innovative models and good practices to be disseminated for a new shared awareness.

Keywords. Higher Education, Universal Design, Sustainable Development, Legal Framework, Low-middle income countries, Tanzania

1. Introduction

The emerging global human rights policy has identified the right to education as one of the tools for greater development of low- and middle-income countries. The perspective of this study focuses on the fourth goal of the 2030 Agenda, which addresses the question of the quality of education and the right to study in the United Republic of Tanzania: the creation of well-trained professors and the creation of an inclusive environment that allows access to high education, which is essential for the creation of an inclusive and in-development society. In order to respond to “the growing diversity of categories of students with special needs that increasingly exert pressure commitments on quality education for the quality of Higher Education (HE) offered” [1], it is necessary to consider the environment in which the specific programmes, seminars, workshops, the necessary assistance and the provision of the multiple services will be carried out.

This research intends to scrutinize the issue of accessibility right to the built environments in United Republic of Tanzania with a special reference to the spaces dedicated to HE. The study seeks to contribute to the implementation and strengthening of efforts aimed at making university spaces and educational offer more inclusive, with particular attention to students with disabilities, through the analysis of evidence on the availability and quality of services within representative university institutions, selected within the Tanzanian academic system. The research has employed review of literatures, legal documents and interviews with different stakeholders. Specifically, the research aspired to deepen the African documentary production (specifically Tanzanian) and, later,

to analyze some emblematic cases related to the most representative university spaces, trying to identify the main problems and which inspirational solutions related to Universal Design are able to interpret the local culture, suggesting appropriate strategies to improve inclusive education in HE institutions. The concertation of Universal Design for Learning (UDL), architectural accessibility and the reinterpretation of African construction languages, can represent the key to the creation of innovative models and good practices to be shared and disseminated not only in Tanzania but, with the necessary cultural declinations, also in the rest of Africa.

2. Higher Education and accessibility in Tanzania

The United Republic of Tanzania, a union of two countries – Tanganyika and Zanzibar, came into existence in 1964, following the independence of 1961 and 1964 respectively. In Tanganyika, the British regime passed political mandate to the nationalist government under the patronage of the Tanganyika African National Union (TANU).

In the then TANU manifesto (1971), education was embedded in the country's national building programme to rid the country from three enemies of development: illiteracy, diseases and poverty. Further, the Arusha declaration's policy of self-reliance, socialism and rural development were among others meant to promote people-centered development initiatives. Initially, the British colonial state had envisioned to establish the Faculty of Law in 1958. Nevertheless, the plan remained nebulous until October 25th, 1961 when TANU's aspiration of HE in Tanganyika became materialized.

At the initial stage, an emphasis was kept on having access to education, which meant, having infrastructure, human resource and teaching facilities: education was open to all, regardless of gender, ethnicity, race or disability. There was no specific attention to a certain minority group within the society: the focus was to serve the entire community. The Tanzania government as time went by, became aware of the legal developments at the international level, inviting governments to be conscience of the need for building inclusive environment in HE institutions.

Analyzing the situation at the international level, the same intentions are reaffirmed: the outcome document of the Second China-Africa Conference on Population and Development states that "The vision Africa We Want articulated in Agenda 2063 aspires an integrated, people-centered, and prosperous Africa, at peace with itself - leaving no one behind, reflecting particularly on inclusive growth and sustainable development. Furthermore, reports and statistics from the Tanzanian Commission for Universities (TCU), indicate an increasing trend in enrolment of students with disabilities in Higher Learning Institutions. However, this positive trend does not correspond to the provision of quality services to people with disabilities, especially in the area of built environment.

2.1. Law and Governance of Inclusive Education

Julius Kambarage Nyerere, the first President of United Republic of Tanzania, in his speeches advocated for equality in community to broadly mean brotherhood (common good). His aspiration for brotherhood meant that education was destined to be by all account inclusive.

Inclusive education (IE) is not a new phenomenon in Tanzania but, while the government has worked to create and disseminate educational services (following the Nyerere's ideology), the built environment has presented more challenges because data,

and awareness of the existence of disabilities, have always been a very complex survey in Africa [2]. What explains the increased disability drop-out in education stemmed from the absence of a legal framework for IE. The United Republic of Tanzania has ratified the Convention Against Discrimination in Education, 429 U.N.T.S. 93 in 1979 and the United Nations Convention on the Rights of Persons with Disabilities in 2009. The government domesticated these instruments in principal legislations, including, The Education Act, Universities Act, The National Construction Council Act [3], etc.

This research sought to investigate the legal framework challenges in addressing inclusive infrastructure, with a focus on local tools. The National Education Policy 1999 vision 2025, is the roadmap of current education laws, including the Education Act [4], and Universities Act [5]. The Education Act is holistic legislation that provides general guidance on education, and how education should be primarily. The Law on Universities governs the registration and administration of HE institutions.

The existence of mentioned local legislation is continually improving the approach to Inclusive Education: from the advancement of teaching tools to the provision of accessible infrastructure to persons with special needs. Some of the achievements brought by the legislation include some fundamental points: the Universities Act ratified that people with special needs must form part of the decision-making organs (Senate and Council); buildings built under the auspices of the National Construction Council Act must provide for the insertion of elevators and accessible tools.

2.2. The University Infrastructure in Tanzania

The following University buildings were built between 1962 to 2008: University of Dar-es-Salaam (UDSM), Sokoine University of Agriculture (SUA), Mzumbe University (MU), Muhimbili University of Allied Health Science (MUHAS), Ruaha Catholic University (RUCU), Catholic University of Allied Health Science (CUHAS), Muslim University of Morogoro (MUM), and Mbeya University of Science and Technology (MUST). None of these universities have inclusive architectural environments.

In 1999 few aspects of IE were included in Tanzania National Education Policy to include Vision 2025. Ultimately, special education needs and disability became a prerequisite for infrastructural development in Higher Learning Institutions. In Tanzania, ratifying the United Nations Convention on the Rights of Persons with Disabilities in 2009, became mandatory for all academic buildings to be inclusive. The University of Dodoma was built when Tanzania started implementing the ratified laws in IE. Hence, being under that advantage, at least some aspects have met the required inclusive physical standards, including roads, paths, and the use of elevators in some buildings, responding to required standards in terms of realizing an inclusive environment.

2.3. Legal Framework

Universities in Tanzania are established under the Universities Act Number 7 of 2005. The Universities Act establishes TCU (Tanzanian Commission for Universities), an organ responsible to approve the establishment of the universities. TCU executes its functions in cognizance of the international, national laws and its own made guidelines and standards.

Tanzania has a total of 47 registered Universities and Colleges, in which 30 are fully-fledged Universities and 17 Colleges both private and public. TCU, in cognizance

that the current university architectural spaces do not meet the criteria of the UD, demands universities to self-assess themselves on the type and level of disabilities that can be accommodated on their premises. On the basis of the case history analyzed, many universities choose to admit students with specific disabilities, making an upstream sorting. The question, therefore, concerns the possibility of including students with disabilities defined as "critical" and their right to study. This paper intends to study the extent to which existing universities in the country satisfy and protect the right to inclusion in HE for people with special needs.

To ensure the effective functioning of a university infrastructure, TCU applies some requests which can be defined as a mandatory requirement. Section 24(2)(d) and (f) of the Universities Act provide: "(d) precise information on availability of library facilities, including the size, quality and quantity of the equipment provided in each programme of instruction by the institution; (f) an inventory of the physical facilities including land available for the exclusive use of the institution;". TCU requests universities to join the Convention Against Discrimination in Education, 429 U.N.T.S. 93, which entered into force on May 22, 1962, and was ratified by the United Republic of Tanzania on January 3, 1979. These conventions are reflected in the Tanzania Education Policy 1999 Vision 2025, which emphasizes access to quality education. Although many groups of people are protected by these conventions and the United Nations Convention on the Rights of Persons with Disabilities.

2.4. Universal design for Learning and architectural languages.

Speaking about inclusion in HE, and more generally to culture (SDG 4 of the 2030 Agenda addresses the issue of the quality of education and the right to study), is certainly a challenge that international cooperation is facing in places such as Africa. It is necessary to specify what is the approach, the language to be used to create a common ground for dialogue, a shared concept that can be deepened, translated, understood and then communicated thanks to a communion of purpose. An interesting analysis emerged during a summer school held in Dar Es Salaam and Berlin in 2016, with students of architecture, urban design and urban and regional planning programs at Ardhi University and the Berlin Technique University. "Collaborations between students from very different cultural backgrounds also meant facing semantic divergences: in Kiswahili, the translation of "heritage" is either *urithi*, which relates to material rather than intangible inheritance, or *makumbusho*, which is a memorial or a museum". In the end, the students decided to create a conceptual common ground by using the English term with a shared definition: "Heritage is what we inherit and what we keep" [6].

Translating this concept into UD principles it is important to underline that those ones must be related not only to material aspects but also to immaterial ones. In particular, by considering principle number four (Perceptible Information) [7] the immaterial factors must be linked to the concept of compatibility which also means to communicate, explain, and tell such that the meaning is immediately related to the culture of the place. Assuming that the concepts of UD are generally shared and, above all, understandable for all cultures would generate a misunderstanding that would entail an additional barrier [8].

While, as previously stated, numerous efforts are underway aimed at making the environments dedicated to HE inclusive, it is also true that in Tanzania the stigma of disability is still present and widespread, especially in rural areas. Hence the need to

include this theme in the fervent Afro-centric university debate regarding the architectural languages that are developing thanks to a new cultural awareness.

There are several studies, produced on the Tanzanian territory, aimed at contributing to the democratization of education through analysis of the evidence on the availability and quality of the services provided, as well as the role and functioning of Units for Students with Disabilities (SWDs) within selected Higher Learning Institutions [9]. A change of pace is currently detectable: an increasing number of Tanzanian universities have launched programs to include students with disabilities, thus demonstrating a progressive commitment to inclusion processes, especially in curricular programs. The training offer makes more and more use of elements also from the point of view of the built environment:

- Application of study programs using specific technologies for different disabilities: Assistive Technology devices, ICT, apps, specific programs and aids to facilitate the study
- Training dedicated to inclusiveness: creation of participatory programs thanks to international cooperation (agreements between universities, visiting professors, exchange of students etc...)
- Specific study of architectural spaces and resolution of architectural barriers working out projects that analyse the reachability of the universities' buildings and, therefore, their accessibility in relation both to every environment and to their connections.

To meet these needs, some universities have set up offices to support the educational offer and the accessibility needs of students with disabilities, introducing the use of new technologies and implementing study plans with methodologies related to UDL. "At the University of Dar es Salaam (UDSM), for example, there is a unit for students with disabilities coordinated by the School of Education (SoEd). The University of Dodoma (UDOM) has a bachelor's programme in special education although there is no independent unit established at the university. At Mkwawa University College of Education (MUCE) a number of students with disabilities have been enrolled although there is no unit to cater for this group of students". At RUCU University of Iringa, the training offer includes the use of some Assistive Technology devices, specific programs and aids as well as a team made up of professors specialized in UDL and support staff.

The methodology used to monitor the current state of universities, in terms of accessibility and inclusion, mainly uses mixed-method research approaches in which primary data is collected using questionnaires and semi-structured interviews with key informants including engineers, architects, property managers and owners, property users and academics of HE Institutions.

The findings demonstrate that, despite the potential for a sustainable built environment, key stakeholders have a low level of understanding. Other essential stakeholders did not have active roles in decision-making concerning building construction projects, while a few architects, aware of the basic design methodologies related to the UD and the need to create more inclusive environments, admitted to not including sustainability factors in their building design. Low levels of sustainability adoption (in terms of accessibility) in the built environment are due to a lack of a particular policy or policy statement on sustainable construction, high initial costs of

sustainable building, a scarcity of experienced professionals, and a limited selection of building materials [10].

The built environment that houses HE (especially the universities of Architecture, Design, Engineering and Education), where new professionals are trained, represents at the same time the place where the problems related to accessibility and UD emerge with greater strength and awareness, but also the laboratory in which to create new hypotheses and new effective languages that can be disseminated in the African territory.

3. The RUCU case

An example of this approach is the design of a pilot project of an Accessibility Centre for the RUCU University of Iringa (Tanzania)¹. The development of this project at the Department of Civil Engineering, Architecture, Territory, Environment and Mathematics of the University of Brescia has led to the formulation of inclusive planning to be carried out in the City of Iringa, that allows exploring the accessibility of university facilities and create forms of support for students with disabilities, applying this investigation to the pilot case of the RUCU. Addressing the theme of UD and UDL has meant creating a new semantics, a new vocabulary to express the concept of inclusion: in a broader sense, accessibility refers not only to the removal of architectural and perceptual barriers, but also to the intelligibility of the entire environment. The concept of accessibility of a complex space such as a university cannot be reduced to individual buildings, access to certain classrooms or offices, overcoming internal elevations or creating bathrooms without architectural barriers. The fundamental element of this reasoning is the whole environment and primarily its reachability independently and without the need for aid, making people, all people, independent and self-sufficient: everyone must be able to access university spaces and various activities in order to perceive their belonging to the RUCU.

The main topics addressed were therefore the practicability of outdoor spaces, allowing access to different buildings and ensuring their usability, and the formulation of study and training plans for teachers thanks to the interaction of traditional learning techniques and the use of ICT that allow new visual, auditory and heuristic approaches. The result of the various intellectual, physical and linguistic efforts applied to this project, is the opening of a new methodological route that combines the different cultural realities through the realization of a physical, empirical and, above all, participated built environment. The possibility to share this compositional and design path with students and professors could be an additional element of deepening: being able to observe the reasoning, the analysis of the experience and university environments, found daily by those who have to teach and, on the opposite side, by those who must understand and assimilate, inevitably leads to new architectural and educational solutions. Methods and languages must necessarily be reconfigured in a long process of formulation, verification

¹ The stipulation of a MOU (Memorandum of Understanding), an agreement that established a partnership between the University of Brescia and the Ruaha Catholic University (RUCU) in Iringa, Tanzania, has started a research entitled: "The design of spaces in Higher Education and Culture in Italy and abroad in accordance with the principles of Universal Design, Universal Design for Learning and the ICF". The "Maria and Consolata Learning Center for Disabilities" project was developed at the Department of Civil Engineering, Architecture, Territory, Environment and Mathematics of the University of Brescia (granted by the Tovini Foundation and the Museke Foundation) by the architect Mariachiara Bonetti

and refinement, but the enormous potential of the on-site application due to the difficulties/opportunities present in the area, prepares for continuous experimentation.

During the research phase at the RUCU it was possible to create a discussion table with the different stakeholders of the university and, in particular, with the person responsible for coordinating the disability office, Prof. Salvius A. Kumburu, who specializes in inclusive teaching. During the interviews, some key questions emerged: the RUCU is composed of several faculties including the Faculty of ICT, the Faculty of Law, the Faculty of Arts and Social Sciences, the Faculty of Business and Management Sciences and the Faculty of Education that provides, among the others, a Bachelor of Education in IE. The combination of these disciplines allows to create a training environment in which the concept of UDL can be declined, deepened and communicated through different languages and educational specificities.

The importance of the implementation of this project lies in the fact that the current enrolment of students with disabilities in HE demands robust and rigorous projects that will among others provide evidence-based support to this group of students in their learning process. The RUCU's Learning Center for Disabilities, Figure 1. is expected to provide a conducive learning environment for students enrolled and other nearby universities.



Figure 1. Project for the new RUCU Center: Analysis of the area and definition of architectural features.

4. Conclusions

There is therefore a regulatory system that indicates the need for inclusive architectural design for all buildings in Tanzania, both in HE and in public services in general. The question that remains unanswered is the extent of its implementation. There are many factors that hinder this implementation: the financial strength of HE Institutions, the available alternative, the lack of administrative will, the difficulty in building an Afro-centric architectural language that can be shared from the cultural point of view, free from xenophilic influences that are not adequate to the local value system and a

persistent cultural stigma against disability. New technologies and new ways of building will help the African continent mitigate the lack of inclusiveness, but it is also the matter of a more equitable global order, one which will truly see accessibility-conscious African architecture able to leave a tangible mark. By developing research and projects such as those carried out at RUCU it is possible to demonstrate that the combination of UDL, architectural accessibility and international cooperation can boost new themes of research and application, by creating innovative models and good practices to be shared and disseminated for a new shared awareness.

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