

Making the Invisible Visible: A Systems Approach to Transforming Inclusive Education in Tanzania through HEET Project

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Abstract

Before the Higher Education for Economic Transformation (HEET) Project, students with disabilities in Tanzanian higher education experienced systemic statistical invisibility, with national records reporting virtually no disaggregated data. This study examined the HEET Project's early impact on inclusive education across 19 Tanzanian universities, assessing whether a large-scale intervention can catalyze durable institutional transformation. Grounded in the social model of disability, the study employed a mixed-methods analysis of implementation reports (2021–2024), covering policy, capacity building, enrolment, infrastructure and curriculum reform. Findings show substantial progress as 89.5% of institutions developed inclusive policies, over 1,350 staff received training (mean coverage 36.7%) and enrolment of students with disabilities increased more than threefold, from 1,037 to 3,068. However, persistent challenges remain, including acute shortages of assistive devices, marked inter-institutional disparities (staff training ranging from 86% to 7%), severe underrepresentation of students with mental health conditions (<1%) and reliance on time-bound project funding. While the HEET Project has successfully centralized the inclusion agenda, sustained transformation requires institutionalized financing, strengthened regulatory enforcement and integration of inclusion into core governance systems.

Keywords: Inclusive education; higher education; disability; HEET Project; systemic transformation; assistive technology.

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Introduction

The pursuit of inclusive education is a global imperative, championed by international frameworks, such as the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) (United Nations, 2006) and the Sustainable Development Goal 4 (SDG 4) (UN, 2015), which advocates for inclusive and equitable quality education for all. In alignment with these global

commitments, the United Republic of Tanzania ratified the UNCRPD and its optional protocol, thereby formally committing to the promotion and protection of the rights of persons with disabilities, including access to inclusive education (Rieser, 2012). Consequently, the commitment to implementing inclusive education based on the Commonwealth's Guide to Implementing Article 24 of the UNCRPD is reflected in national policies, including the (Rieser, 2012; United Republic of

Tanzania, 2010) and the (United Republic of Tanzania, 2017). However, the pathway to genuine inclusion in higher education has been fraught with environmental, social and academic barriers (UNESCO, 2024; Ccorihuaman et al., 2024; Chiu et al., 2025) and the availability of resources and facilities for the provision of inclusive education (Losioki & Kapilima, 2025).

In Tanzanian universities, students with disabilities often face environmental, social and academic barriers, as the burden of adaptation tends to fall on the student rather than on the institution, highlighting a need for systemic transformation to support genuine inclusion (Bhalalusesa, 2016; Shemndolwa et al., 2025). Research indicates that students frequently bear the burden of adapting to inaccessible infrastructure, limited support services and rigid institutional systems, rather than the universities transforming their structures to accommodate diverse needs (Bhalalusesa, 2016; Shemndolwa et al., 2025). This encourages low enrolment rates, high dropout risks and learning environments that are physically and pedagogically inaccessible. These challenges are further compounded by social attitudes and insufficient awareness among faculty and administrative staff, which can undermine students' sense of belonging and academic success. Addressing these barriers requires systemic reforms, including the development of inclusive policies, accessible learning environments and proactive institutional support mechanisms to ensure that higher education becomes genuinely equitable and supportive for all students.

The Government of Tanzania, through the Ministry of Education, Science and Technology (MoEST), initiated a major five-year (2021-2026) World Bank-Funded project, the Higher Education for Economic Transformation (HEET) Project. HEET aimed at modernizing universities to drive economic growth by aligning programs with industry needs, boosting research and innovation, improving infrastructure and strengthening linkages with the private sector, ultimately producing skilled graduates for national development (World Bank, 2021). Furthermore, the HEET Project emphasized enhancing the quality, relevance and equity of higher education, with a specific component dedicated to strengthening inclusive education for students with special needs (Ministry of Education, Science and Technology, 2021).

Theoretically, inclusive education is conceptualized not merely as the physical integration of students with disabilities into mainstream settings but as a profound transformation of educational cultures, policies, and practices that responds to the diversity of all learners (Booth & Ainscow, 2002). The social model of disability, which underpins this view, posits that disability is not an individual deficit but arises from societal barriers that restrict participation (Oliver, 2013). The role of higher education institutions, therefore, is to dismantle these barriers, whether attitudinal, pedagogical, physical or systemic.

Successful inclusive education initiatives share common elements: strong policy frameworks, universal design for learning in curriculum and instruction, accessible physical and digital infrastructure and the provision of assistive technologies (Edyburn, 2010). For instance, Global North universities have established comprehensive disability resource centers that offer academic accommodations, training and support (Dahal, n.d.). However, in many Sub-Saharan African contexts, including Tanzania, the implementation of such models is often constrained by limited resources, inadequate training and deeply entrenched stigmatizing attitudes (Morwane et al., 2021; UNESCO & UNPRPD, 2023; Nawire et al., 2025).

Previous studies in Tanzania have largely focused on primary levels (Kisanji, 1995), leaving a significant gap in the literature regarding higher education. The HEET Project presents a unique case study to examine a concerted, national-level effort to bridge this gap. This research analyses whether the project's multi-pronged approach, simultaneously targeting policy, infrastructure, curriculum and capacity building, can effectively catalyze the systemic change required for sustainable inclusion. Therefore, this study presents a comprehensive analysis of the initial impact of the HEET Project's inclusive education portfolio across 19 participating higher education institutions. It explores how a large-scale, system-wide intervention can drive a paradigm shift in institutional practices and culture. The study details the strategies implemented, the achievements attained, the challenges encountered and the measures adopted to ensure sustainability. By situating these findings within the broader global discourse on inclusive education, the study provides critical insights for policymakers, educators and international development partners involved in similar transformative initiatives.

Table 1: HEET Project Framework and Inclusive Education Integration

HEET Component	Primary Objectives	Inclusive Education Linkages
Infrastructure Development	Construction/rehabilitation of learning facilities, hostels, and laboratories	Incorporation of universal design principles, accessible pathways, and specialized equipment
Curriculum Reform	Alignment with labor market needs, innovative pedagogies	Integration of inclusive education modules, Universal Design for Learning principles
Digital Transformation	Enhanced ICT infrastructure, online learning platforms	Accessible digital content, assistive technologies, and alternative format materials
Capacity Building	Staff development, leadership training	Inclusive education awareness, specialized skills (sign language, braille)
Industry Linkages	Memoranda of Understanding, advisory councils	Inclusive workplace preparation, disability-aware employer partnerships
System Management	Quality assurance frameworks, monitoring systems	Inclusive education indicators, disability-disaggregated data collection

Source: World Bank (2021); Ministry of Education, Science and Technology (2021); United Republic of Tanzania, 2017; Rieser, 2012)

Methodology

This study employed a structured approach to investigate disability-friendly initiatives in universities. It combined quantitative and qualitative data to provide a comprehensive understanding of the policies, practices and support mechanisms implemented across institutions.

Research design

This study used a descriptive, mixed-methods design, integrating quantitative and qualitative data to examine disability-friendly initiatives in universities.

Population and Sampling

A purposive sampling approach was employed to include 19 institutions implementing the Higher Education for Economic Transformation (HEET) Project. The study analyzed official implementation reports covering project activities undertaken between 2021 and 2024. The study used a total of all HEET-implementing institutions, with the unit of analysis comprising official institutional HEET implementation reports and consolidated Ministry of Education, Science and Technology (MoEST) technical monitoring reports covering project activities undertaken between 2021 and 2024.

The institutions comprised 14 higher education institutions: University of Dar es Salaam (UDSM), University of Dodoma (UDOM), Sokoine University of Agriculture (SUA), State University of Zanzibar

(SUZA), Mbeya University of Science and Technology (MUST), Ardhi University (ARU), Mzumbe University (MU), The Nelson Mandela African Institute of Science and Technology (NM-AIST), The Open University of Tanzania (OUT), Moshi Co-operative University (MoCU), Dar es Salaam University College of Education (DUCE), Mkwawa University College of Education (MUCE), Muhimbili University of Health and Allied Sciences (MUHAS), and Mbeya James University of Science and Technology (MJNUAT).

The study further included five institutions under the Ministry of Finance: Institute of Finance Management (IFM), Institute of Rural Development Planning (IRDP), Eastern Africa Statistical Training Centre (EASTC), Tanzania Institute of Accountancy (TIA) and Institute of Accountancy Arusha (IAA).

Data Collection Instruments

Documentary review was employed as the primary data collection method. Data was extracted from the official institutional HEET implementation reports and consolidated MoEST technical monitoring reports covering the period 2021–2024. The documentary sources contained both quantitative and qualitative information relevant to the study objectives and guiding research questions. Quantitative data included the number of disability-inclusive policies developed or revised, personnel trained, students with disabilities enrolled and identified, assistive technologies procured, infrastructure improvements and curriculum review

activities. Qualitative data comprised descriptions of institutional implementation strategies, capacity-building initiatives, inclusive education practices, implementation challenges, lessons learned, and sustainability concerns.

Validity and Reliability

Validity was strengthened through data triangulation, comparing information from the official institutional HEET implementation reports with consolidated reports from the official institutional HEET implementation reports and the Ministry of Education, Science and Technology (MoEST), enabling cross-verification of activities and achievements. Reliability was enhanced through the use of official, standardized reports submitted through established HEET monitoring and reporting systems. The inclusion of documentary evidence from all participating institutions further strengthened the consistency and credibility of the findings.

Data Analysis

Quantitative data was summarized using descriptive statistics across institutions and reporting years. The analysis addressed research questions related to policy implementation, capacity building, student

enrolment and support, infrastructure and ICT accessibility, and curriculum reforms. Qualitative data was analyzed using thematic content analysis approach. The identified themes were interpreted to complement and explain the quantitative findings regarding the HEET Project's contribution to inclusive higher education in Tanzania.

Ethical Considerations

The study used publicly available reports, with no direct human participation. Institutional confidentiality was maintained and data was reported accurately and responsibly.

Results and Discussion

This section presents the findings of the study, guided by research questions:

Research Question 1: How are inclusive education policies being developed and implemented in higher education institutions, and what factors influence their institutionalization?

The findings in Table 2 demonstrate substantial progress alongside pronounced implementation gaps.

Table 2: Status of Inclusive Education Policy and Guideline Development

Institution	Policy Developed	Guideline Developed	Implementation Status
Institution 1	Yes (Disability and Special Educational Needs Policy)	Yes	100%
Institution 2	Yes (Gender and Diversity Management Policy)	Yes	100%
Institution 3	Yes (Inclusive Education Policy)	Yes	100%
Institution 4	Not yet	Yes	95%
Institution 5	Yes (Inclusive Education Policy)	Yes	50%
Institution 6	Yes (Multiple Policies)	Yes	100%
Institution 7	Yes (Inclusive Education)	Yes	100%
Institution 8	Relevant, inclusive education and special	Yes	Not specified
Institution 9	needs policies and guidelines		
Institution 10			
Institution 11			
Institution 12			
Institution 13			
Institution 14			
Institution 15			
Institution 16			
Institution 17			
Institution 18	Draft	No	Not yet
Institution 19	No	No	0%

Evidence from 17 (89.5%) HEET-participating institutions indicated substantial progress in institutionalizing inclusive education frameworks. Most institutions had developed formal inclusive education or related diversity policies, many of which supported by implementation guidelines and, in some cases, have been fully operationalized. Several institutions reported complete implementation (100%). Others had achieved significant, though partial, progress. For example, institution 4 had developed comprehensive implementation guidelines by 95%. On the other hand, Institution 18 reported that inclusive education policy is currently being drafted. In contrast, one institution indicated that neither a policy nor implementation guidelines are yet in place.

Overall, these findings demonstrate a sector-wide shift from fragmented and informal accommodation practices to more structured, policy-driven approaches to inclusion. While institutions differ in the pace and extent of implementation, the overall trend reflects substantial progress toward embedding inclusive education within institutional governance, policies, and operational systems. Therefore, the establishment of institutional inclusive education policies by 89.5% represents a significant milestone, signalling a transition from ad hoc accommodation practices to standardized, systematic, and policy-driven frameworks for inclusive education.

Literature consistently identifies formal policy frameworks as foundational to inclusive higher education reform, as they provide legitimacy, operational guidance and accountability mechanisms (UNESCO, 2017; Mittler, 2012). Comparable initiatives in South Africa, Australia and the United Kingdom similarly demonstrated that disability and inclusion policies function as critical entry points for institutional change when aligned with national regulatory systems (Mutanga, 2018).

The results further highlight the influential role of national governance structures. The proactive engagement of the Tanzania Commission for Universities (TCU) aligns with global best practice, particularly the strategic use of national quality assurance agencies to institutionalize inclusion (European Agency for Special Needs and Inclusive Education, 2018; UNESCO, 2017). Evidence from Ireland and the European Higher Education Area, while celebrating the 30th year of the European Agency for Special Needs and Inclusive Education

(EASNIE), shows that embedding inclusion criteria within accreditation and audit processes significantly enhances institutional compliance and prioritization (European Agency for Special Needs and Inclusive Education, 2026). The HEET findings thus reinforce the importance of regulatory leverage in translating inclusive education from policy intent into institutional obligation.

However, when results are examined beyond policy presence, a pronounced implementation gap becomes evident. While one institution reported full implementation, others showed limited or no implementation. This uneven pattern reflects disparities in institutional capacity, leadership commitment, and resource availability. Such findings mirror broader evidence from Sub-Saharan Africa, South Asia and Latin America, where policy enactment is frequently constrained by weak governance structures, limited financial autonomy and competing institutional priorities (Croft, 2010). These findings underscore a key lesson echoed in the literature: policy adoption alone does not guarantee institutionalization. Rather, sustainable inclusion requires robust accountability systems, earmarked budgets, leadership incentives and continuous monitoring embedded within core university governance structures (Ainscow & Miles, 2008; UNESCO, 2021). Without these enabling mechanisms, inclusive education risks remaining symbolic rather than operational, a challenge observed even in comparatively well-resourced higher education systems.

Research Question 2: To what extent has the HEET Project strengthened institutional and human capacity to support inclusive education in Tanzanian higher education institutions?

Under the capacity-building component, HEET Project implemented a large-scale inclusive education training program that reached 1,351 university staff members across participating institutions. The training focused on key areas, including identification of special needs, use of assistive technologies and inclusive pedagogical approaches. Quantitatively, the mean and median proportions of staff trained across universities were 36.71% and 34.27%, respectively, indicating that, on average, institutions trained one-third of their workforce. However, the overall proportion of staff trained across all universities was lower (20.72%), reflecting the effect of institutional size with

comparatively limited proportional coverage (Table 3).

From an analytical perspective, the training of academic and administrative staff constitutes one of the HEET Project's most impactful interventions, where staff capacity and attitudes are identified as decisive factors for effective inclusive education (Sharma et al., 2012). By extending training beyond disability units to include mainstream academic and administrative staff, the HEET Project directly addressed institutional culture, aligning with

approaches used in Canada and Scandinavian countries, where inclusion is framed as a shared institutional responsibility, rather than a specialist concern (Magnus & Tøssebro, 2014). Comparable studies in Kenya, India and Brazil indicate that staff sensitization leads to measurable improvements in student participation, retention and overall learning experiences (Mutanga & Walker, 2017; Chataika et al., 2012). HEET Project, therefore, reinforces the centrality of capacity building as a catalyst for institutional transformation.

Table 3: Institutional Engagement in Inclusive Education Training Under the HEET Project

Rank	Institution	Staff trained (n)	% of Institutional staff trained	Contribution to total trained staff (%)	Position relative to mean (36.71%) & median (34.27%)
1	Institute of Finance Management (IFM)	300	86	22.2	>> Mean, >> Median
2	Institute of Accountancy Arusha (IAA)	180	72	13.3	>> Mean, >> Median
3	Ardhi University (ARU)	50	65	3.7	>> Mean, >> Median
4	Nelson Mandela African Institution of Science and Technology (NMAIST)	22	40	1.6	> Mean, > Median
5	Mkwawa University College of Education (MUCE)	80	38	5.9	> Mean, > Median
6	Eastern Africa Statistical Training Centre (EASTC)	27	35	2.0	< Mean, ≈ Median
7	Mwalimu Nyerere University of Agriculture and Technology (MNUAT)	166	33	12.3	< Mean, < Median
8	Tanzania Institute of Accountancy (TIA)	80	31	5.9	< Mean, < Median
9	Muhimbili University of Health and Allied Sciences (MUHAS)	100	13	7.4	<< Mean, << Median
10	University of Dar es Salaam (UDSM)	200	12	14.8	<< Mean, << Median
11	Mbeya University of Science and Technology (MUST)	73	8	5.4	<< Mean, << Median
12	Open University of Tanzania (OUT)	73	7	5.4	<< Mean, << Median
	Total (all institutions)	1,351	—	100	—
	Mean % of institutional staff trained	—	36.71%	—	—
	Median % of institutional staff trained	—	34.27%	—	—
	Overall % of staff trained across all universities	—	20.72%	—	—

Table 4: Enrolment Trend of Students with Disabilities (2018–2024)

Academic Year	Total enrolment (PWDs)	% Growth (year on year)	Context & data source
2018/2019	~680 (Estimate)	—	Pre-HEET baseline: Low visibility; reliance on voluntary disclosure without support incentives
2019/2020	~750 (Estimate)	+10.3%	Stagnation: Systemic barriers limited growth
2020/2021	~890 (Estimate)	+18.7%	Policy awareness increased nationally
2021/2022	1,037	+16.5%	Verified baseline before full HEET rollout
2022/2023	1,850	+78.4%	Identification drives and infrastructure upgrades
2023/2024	3,068	+65.8%	“HEET Effect”: Comprehensive needs assessments

The findings further reveal substantial inter-institutional disparities in training coverage. While some institutions demonstrated high engagement, others fell below both the mean and median training levels (Table 3: Rank 7-12). This uneven distribution raises important equity concerns, as institutions with stronger existing capacities appear to benefit disproportionately from externally funded capacity-building initiatives. Similar patterns have been reported in Kenya, Ghana and Ethiopia, where well-established universities have tended to attract a larger share of capacity-building resources, thereby widening disparities across the higher education sector (Mastercard Foundation, 2021).

International experience offers relevant lessons for addressing these gaps. The Training of Trainers model implemented in Serbia and parts of Eastern Europe has proven effective in cascading expertise across institutions while reducing dependency on external funding (European Training Foundation, 2018). In addition, European vocational and higher education systems increasingly adopt blended professional development approaches, including mentoring, communities of practice, peer observation and action research, to embed inclusive pedagogical change and support locally grounded solutions (Florian & Black-Hawkins, 2013). These models resonate strongly with the HEET findings and highlight pathways for strengthening both equity and sustainability.

Research Question 3: How has the HEET Project influenced the enrolment of students with disabilities in Tanzanian higher education institutions between 2018 and 2024?

Drawing on TCU Vital Statistics on University Education in Tanzania (2018–2024) and institutional data generated through the HEET Project, a clear and transformative trajectory in the enrolment of students with disabilities in Tanzanian universities is

evident. The results show a distinct “J-curve” growth pattern, characterized by a prolonged period of low and modest enrolment growth before 2021, followed by a sharp acceleration after the implementation of HEET interventions. Between the 2021/22 and 2023/24 academic years, enrolment increased by more than threefold, rising from 1,037 to 3,068 students (Table 4). This dramatic increase coincides directly with the introduction of systematic identification, reporting and institutional inclusion mechanisms under the HEET Project (Tanzania Commission for Universities, 2025).

From an analytical perspective, the systematic identification of 3,068 students with disabilities represents a decisive break from the historical “statistical invisibility” of disability within Tanzanian higher education. Before HEET, national enrolment records were fragmented and largely silent on students with disabilities. For example, Higher Education Students Admission, Enrolment and Graduation Statistics (2012–2018) (Tanzania Commission for Universities, 2019) and TCU Vital Statistics (2018–2020) (Tanzania Commission for Universities, 2021) recorded virtually no disaggregated disability data (Tanzania Commission for Universities, 2021). The increase observed after 2021 strongly suggests that earlier low enrolment figures reflected widespread non-disclosure rather than a lack of qualified students, driven by stigma, inaccessible learning environments and limited institutional support (Matonya, 2016).

In Table 5, visual impairment constitutes the largest share of enrolled students (46–48%), reflecting long-established transition pathways from special secondary schools and relatively mature support infrastructures, such as Braille units at UDSM (Mgumba & Kija, 2023). Students with physical impairments and hearing impairments represent the second-largest categories (11-13%), a trend closely aligned with HEET-funded campus accessibility

improvements, including ramps, elevators, rehabilitated hostels and libraries. Students with albinism account for approximately 3% of enrolment, supported by national policy and scholarships (United Republic of Tanzania, 2025) and non-government organization scholarships (ADRA Tanzania, 2023; Africa Albinism Network & Tanzania Albinism Society, 2025) while those with

mental health or psychosocial remain significantly underrepresented (<1%). Multiple disabilities and mental health/psychosocial disabilities were rarely reported, although both categories appeared in 2024 at very low levels (<1%), reflecting persistent stigma and underreporting (Mgumba & Kija, 2023).

Table 5: Enrolment of Students with Disabilities in Tanzanian University Institutions (2021–2024)

Disability Category	Year enrolled				Average % (2021–2024)
	2021	2022	2023	2024	
Visual impairment	517 (46.2%)	710 (47.8%)	740 (46.9%)	1,559 (47.1%)	46–48%
Physical impairment	79 (7.1%)	175 (11.8%)	213 (13.5%)	384 (11.6%)	11–13%
Hearing impairment	138 (12.3%)	213 (14.3%)	189 (12.0%)	364 (11.0%)	11–13%
Albinism	35 (3.1%)	55 (3.7%)	48 (3.0%)	42 (1.3%)	3%
Multiple disability	4 (0.4%)	0 (0%)	0 (0%)	61 (1.8%)	<1%
Mental health / psychosocial	0 (0%)	0 (0%)	0 (0%)	11 (0.3%)	<1%
Other health related	262 (23.4%)	345 (23.2%)	349 (22.1%)	647 (19.5%)	22–23%
Combined (Deaf & Blind)	6 (0.5%)	0 (0%)	0 (0%)	0 (0%)	<1%
Total students with disabilities (all categories)	1,119	1,486	1,577	3,312	—

Research Question 4: How have infrastructure development and curriculum reform contributed to improving inclusive education in Tanzanian higher education institutions under the HEET Project?

Substantial tangible investments were made in both physical and digital infrastructure, reflecting the HEET Project’s integrated approach to accessibility and academic transformation. Institutional reports documented widespread construction of ramps, installation of wide doors and rehabilitation of hostels and libraries to improve physical accessibility, alongside a parallel digital transformation exemplified by UDSM’s rollout of online learning platforms hosting over 1,000 programs (MoEST, 2025). These interventions align with global evidence emphasizing that accessibility must be addressed as a systemic, multi-dimensional construct rather than a collection of isolated measures (United Nations, 2006). The explicit incorporation of universal design principles in new infrastructure further reflects international calls to mainstream accessibility within the built environment, with comparable mandates in Japan,

the United States, and the European Union, demonstrating that early integration of universal design reduces long-term retrofitting costs and improves usability for all students (Steinfeld & Maisel, 2012).

Curriculum reform complemented these infrastructural investments by embedding inclusion more firmly within academic practice. One institution integrated inclusive education into 12 undergraduate programs while two others reviewed approximately 25% and 100% respectively, of their undergraduate curricula to incorporate inclusive principles and better align programs with labor market needs (Ministry of Education, Science and Technology, 2025). International evidence indicates that curriculum-level inclusion enhances learning outcomes for diverse student populations, particularly when aligned with Universal Design for Learning principles (CAST, 2018). The HEET Project’s linkage of inclusive curricula to labor market demands through Industry Advisory Committees mirrors successful models in Germany and Australia, where inclusive education is framed as both a social

and economic strategy (OECD, 2019). This alignment reinforces a transformative understanding of inclusion that extends beyond access to encompass meaningful participation, employability and social contribution, an approach shown to be critical for sustaining political and financial commitment to inclusion in both high- and middle-income countries (UNESCO, 2021).

Research Question 5: What sustainability challenges threaten the long-term impact of the HEET Project's inclusive education interventions in Tanzanian higher education institutions?

Analysis of institutional and ministerial reports identified several challenges that may undermine the long-term sustainability of inclusive education interventions introduced through the HEET Project. Specifically, the 2025 technical monitoring report by the Ministry of Education, Science and Technology on HEET implementation in higher education institutions identified persistent shortages of assistive technologies and specialized support services for students with disabilities despite notable improvements in disability identification and enrolment. The report highlighted continued reliance on time-bound HEET funding, with limited evidence that universities had established dedicated recurrent budget lines to sustain inclusive education initiatives beyond the project's lifespan. In addition, it documented uneven implementation capacity across the higher education institutions, resulting in variations in the scope and quality of inclusive education practices. Furthermore, disability inclusion remained inadequately integrated into institutional planning, financing mechanisms and quality assurance systems, raising concerns about the long-term institutionalization of the remarkable reforms following the implementation of the HEET Project.

These challenges mirror broader sustainability constraints common to development-driven reform initiatives. Shortfalls in assistive technologies align with evidence from Sub-Saharan Africa and Southeast Asia, where inclusive higher education initiatives frequently struggle to meet documented needs (Chataika et al., 2012) with global estimates indicating that assistive technology demand in low-income regions is met at only 5–15% due to financial and systemic barriers (World Bank & UNICEF, 2023). The reliance on external project funding without institutionalized budget lines further exposes institutions to fiscal cliff once project support ends,

reinforcing international evidence that sustainable inclusion requires embedding disability-related expenditures within recurrent institutional and national financing frameworks (OECD, 2019).

Moreover, while the training of general academic and administrative staff contributed to awareness and cultural change, it did not address the chronic shortage of specialized professionals, such as sign language interpreters, educational psychologists and assistive technology specialists, a structural challenge widely reported in LMICs (World Health Organization and World Bank, 2011; Masuku et al., 2024). Countries that have achieved more durable progress, including Malaysia and South Africa, have done so by integrating specialist training into national human resource and higher education planning frameworks (Mutanga, 2018). Collectively, these findings underscore the limits of project-centric approaches and highlight the necessity of embedding inclusive education within interconnected micro (student experience), meso (institutional practice) and macro (policy and financing) systems to ensure sustainability (Ainscow & Miles, 2008; UNESCO, 2021).

Therefore, systematic identification and formal support structures are necessary but insufficient conditions for sustainable inclusion in higher education. Without institutionalized financing, specialized human resources and coordinated implementation across universities, improvements in visibility and policy compliance risk outpacing institutions' capacity to deliver equitable, high-quality and sustainable educational support for students with disabilities.

Conclusions and recommendations

Conclusions

It is concluded that the HEET Project has shifted inclusive education in Tanzanian higher education from marginal practices toward formal institutional recognition. By embedding inclusion within policies, infrastructure, curricula and reporting systems, the project has rendered students with disabilities statistically visible. The near threefold enrolment increase, existing policies in 89.5% of institutions and training of 1,350 staff demonstrate that systemic interventions can catalyze transformation. However, persistent resource constraints, uneven capacity and funding dependence underscore that policy adoption alone is insufficient. Enduring transformation requires integrating inclusive

education into governance, financing and accountability frameworks.

Recommendations

Based on the conclusions, several recommendations are made. First, universities and the government should institutionalize disability inclusion by integrating inclusive education into recurrent budgets, strategic plans and governance frameworks. Second, the Ministry of Education, Science and Technology and the Tanzania Commission for Universities should strengthen monitoring and quality assurance mechanisms to support consistent implementation of inclusive education policies across higher education institutions. Third, universities should invest in specialized human resources, assistive technologies and disability support services to enhance equitable participation and learning outcomes for students with disabilities. Fourth, future capacity-building initiatives should prioritize institutions with limited implementation capacity to reduce disparities in inclusive education practices. Finally, future research should examine the long-term effects of the HEET Project on student retention, academic progression, graduation outcomes and post-project sustainability of inclusive education interventions.

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