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## Inclusive education in Africa: Transforming higher education in low-income countries

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### ARTICLE INFO

Editor: DR B Gyampoh

#### Keywords:

Inclusive education

Higher education

Low income countries

### ABSTRACT

Inclusive education has become a global priority, with the United Nations Convention on the Rights of Persons with Disabilities advocating its integration at all educational levels. However, most studies focus on primary and secondary education, leaving a gap in understanding inclusive practices within higher education, especially in low-income countries. This study addresses that gap by analyzing inclusive education initiatives in African higher education institutions through a systematic literature review of 15 relevant articles from databases such as Scopus, Web of Science, and ScienceDirect. The findings reveal that countries like Algeria, Nigeria, Ethiopia, Congo, Somalia, and Uganda face significant challenges, including inadequate infrastructure, limited educator training, and societal stigma. Despite these obstacles, several countries have made progress. Algeria and Nigeria have introduced laws to support students with special needs, Ethiopia has enhanced accessibility through international treaties, and Uganda has improved mentoring programs under the Persons with Disabilities Act. Best practices identified include the application of Universal Design for Learning (UDL), specialized teacher training, inclusive entrepreneurship programs, and adopting sign language in academic settings. While challenges persist, particularly regarding resource constraints and policy implementation gaps, the study highlights promising strategies for advancing inclusive higher education in Africa. Tailoring these approaches to local contexts can significantly improve educational access and quality for students with disabilities in low-income countries.

### Introduction

Since adopting the United Nations (UN) Convention on the Rights of Persons with Disabilities, inclusive education has become a key priority in global development. Many countries have initiated inclusive education programs per with this convention [1].

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<https://doi.org/10.1016/j.sciaf.2025.e02708>

Received 17 December 2024; Received in revised form 23 February 2025; Accepted 16 April 2025

Available online 16 April 2025

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However, inclusive education practices, especially in higher education, remain unclear and face numerous challenges [2]. A study by Sánchez et al. [3] identified several barriers to implementing inclusive education in higher education settings. These barriers include educators' limited capacity to address all students' diverse needs, inadequate learning resources, and lack of effective organizational and pedagogical strategies. As a result, there is often insufficient accountability for creating an equitable and inclusive curriculum. This issue persists despite the growing number of students with disabilities in many countries [4].

The discussion surrounding inclusive education primarily focused on primary and secondary education; however, universities also play a vital role in developing an inclusive education system [5]. Universities should not only act as academic institutions that prepare individuals for the workforce but also serve as agents of change, promoting principles of equality, justice, and respect for diversity. Unfortunately, many universities – especially in low-income countries - face significant challenges in creating an inclusive academic environment. These challenges include unequal access to education due to poverty, the stigmatization of some marginalized groups, and inadequate infrastructure [6]. For individuals with disabilities, inaccessible building structures hinder their ability to move around effectively, while curriculum design, assessment and evaluation processes often lack inclusivity [7]. Additionally the limited capability of teachers, combined with discriminatory attitudes stemming from stigma and a lack of understanding among educators and peers, has led to universities being viewed as environments susceptible to discrimination [8,9].

To overcome the barriers to inclusive education, various studies from different contexts propose diverse solutions for enhancing inclusive education through pedagogical innovation, values-based leadership, and legal frameworks [10–12]. Synthesizing these studies is necessary to provide a comprehensive understanding of how to build inclusive education. A Systematic Literature Review (SLR) offers a transparent and explicit protocol for researchers to identify, assess, and synthesize relevant studies on a particular research topic, thereby gathering existing knowledge and evaluating the state of a field [13,14].

Although SLR studies have explored various aspects of inclusive education in higher education—such as the challenges faced by students with disabilities [15,16], the attitudes and challenges of faculty in accommodating students with disabilities [17,18], and the training provided to educators to support students with disabilities [19,20]—they have not considered the socioeconomic context of different countries in conducting SLR existing publications. It is essential to take into account the socioeconomic context, as strategies and plans that work in wealthier nations often fail when applied to developing or low-income countries without appropriate adaptations [21].

The implementation of inclusive education in low-income African countries is becoming increasingly urgent due to the continent's rapidly growing youth population and increasing demand for higher education [22]. Although the number of students with disabilities in African universities is rising, many institutions are not adequately prepared to meet their needs [23]. This lack of readiness can be attributed to unstable economies and insufficient inclusive policies and regulatory frameworks, which result in limited resources and infrastructure [24]. Moreover, Africa's diverse socio-cultural landscape often poses unique challenges when applying standardized models of inclusive education developed in more affluent regions [25].

Researching inclusive education in African higher education systems is essential for addressing existing gap, as the unique conditions and challenges in this region are often overlooked in global studies. Understanding how inclusive education is implemented in Africa—where educational inequalities are deeply intertwined with economic and social challenges—can provide valuable insights developing and adapting effective inclusive policies [26]. Without these studies, African universities risk further marginalizing students with disabilities, perpetuating inequality, and failing to fully utilize the diverse potential of their student populations.

This paper addresses existing gaps by focusing on the analysis of inclusive education in higher education within the context of low-income African countries [27]. In line with this, the study formulates three questions: (1) What are the challenges and concept of inclusive education in low-income countries? (2) What policies have higher education institutions in these countries developed to support inclusive education? (3) What best practices exist for inclusive education in higher education within low-income African countries? Answering these questions will help identify models that can enhance inclusive education practices in low-income African countries and as a source of inspiration for other nations or institutions seeking to develop inclusive education frameworks.

## Literature review

### *Inclusive education*

Inclusive education is an educational concept that has become a global priority. It refers to an education system where all learners, including those with special needs, can fully participate in learning without discrimination. Inclusive education aims to transform the traditional approach of the education system to embrace diversity better. There is hope that the commitment to inclusive education will persist alongside worldwide efforts to advocate for the rights of all individuals to receive equal educational opportunities.

Inclusive education emerged in the 1970s, characterized by a shift from a segregated approach to a more integrative one [28,29]. Previously, children with disabilities were typically placed in special schools or programs separated from mainstream education. It often leads to their isolation from the broader social environment and limited academic and social potential [30]. To further this systemic change, UNESCO launched the Salamanca Declaration in 1994, marking a significant milestone in inclusive education. The declaration urged governments worldwide to ensure that mainstream education systems accommodate all students, regardless of their social, cultural, or physical backgrounds [31]. As a result of this declaration, many countries began adopting inclusive policies as part of their national education reforms.

Three main challenges to inclusive education in low-income countries (LICs) are commonly identified: 1) inadequate funding to provide necessary facilities for students with disabilities. Schools in LIC often lack the necessary budget to support the needs of students with disabilities [32–35]; 2) school systems that inhibit inclusive education. Authoritarian teaching systems, test score-orientated

learning, and inflexible curricula [36,37]; 3) persistent stigma against people with disabilities, which often leads to discrimination and exclusion of students with special needs from their learning environment [38].

### *Inclusive education in higher education*

The development of inclusive education in higher education institutions presents challenges and opportunities. A significant challenge is the scarcity of resources, with many higher education institutions in low-income countries lacking adequate budgets to provide essential facilities for students with disabilities [39,35]. In addition, inclusive education in higher education faces the challenge of a lack of lecturer training in dealing with students with special needs [40]. Limited resources, including support services and accessibility technology, also hinder the effective implementation of inclusive policies. Negative attitudes from some academic staff further exacerbate the situation, especially in tertiary institutions with dense and competitive curricula [41]. In this case, the role of lecturers is crucial; therefore, training in flexible and adaptive teaching strategies, and mastering educational technology that supports students with special needs, is important [42,20,43].

There are three dominant trends in implementing inclusive education in higher education. First, there has been an increase in the participation of students with disabilities, reflected in policies and programs that promote inclusion across many campuses [44]. Universities are increasingly committed to creating inclusive environments for all students, ensuring physical and academic access. Second, many institutions have established disability support units to assist students in addressing academic and social challenges and improving campus accessibility [45,46]. Third, the integration of technology has further advanced inclusive learning in higher education, allowing for the customization of educational materials to suit individual needs through digital tools [47,48].

### *Low-income countries*

Low-income countries (LICs) are defined as nations with a Gross National Income (GNI) per capita below the threshold set by the World Bank, which in 2023 was less than \$1,135 [27]. According to the [27] classification, there are 28 countries in this category. These countries often face significant economic challenges, including widespread poverty, limited access to education and healthcare services, and inadequate infrastructure [49]. These conditions create a cycle of poverty, where individuals have limited opportunities to improve their quality of life.

Inclusive education in higher education institutions in low-income countries faces the challenges of lack of physical accessibility on campus, lack of training for lecturers, and limited availability of support services as some of the main obstacles in implementing inclusive education at the higher education level in these countries [50]. In addition, social and cultural constraints also play a role in slowing down the implementation of inclusive education in low-income countries. Negative societal attitudes towards individuals with disabilities often result in discrimination in academic settings [51,52]. However, some initiatives in low-income countries show great potential to advance inclusive education. For example, programs supported by international organizations such as the World Bank and UNICEF have helped universities improve accessibility infrastructure and provide training for lecturers on inclusive teaching [53]. Although significant challenges remain, these initiatives highlight the importance of collaboration between governments, international organizations and educational institutions in improving inclusive education in low-income countries.

## **Method**

This study uses a systematic review and synthesis approach to give an in-depth overview of publications on inclusive education in higher education institutions (HEIs) in low-income countries, as defined by The World Bank [27]. The methodology follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines, which involve identifying relevant topics and criteria, screening for eligibility, determining inclusion, and conducting further analysis [54].

### *Search strategy and research procedure*

The search was carried out in three primary databases—Scopus, Web of Science, and Science Direct—between February 22, 2024, and March 8, 2024, using the search terms: "inclusive education" AND "faculty," "inclusive education" AND "higher education," and

**Table 1**  
Search strategy on inclusive education in higher education 's article.

No	Database	Operator	Search term
1.	Scopus	Keywords, Abstracts, Title	1. "inclusive education" AND "faculty" 2. "inclusive education" AND "higher education" 3. inclusive education" AND "university"
2.	Web of Science	Keywords, Abstracts, Title	1. "inclusive education" AND "faculty" 2. "inclusive education" AND "higher education" 3. "inclusive education" AND "university"
3.	Science Direct	Keywords, Abstracts, Title	1. "inclusive education" AND "faculty" 2. "inclusive education" AND "higher education" 3. "inclusive education" AND "university"

"inclusive education" AND "university," applied to document titles, abstracts, and keywords. Publications from the last 10 years (2014–2024) were considered to ensure the inclusion of recent, relevant research. Table 1. shows the keywords used to search for the articles to be reviewed.

From a rigorous search strategy, we found 1698 articles from the Scopus database, 2503 articles from the Web of Science Database, and 2345 articles from the Science Direct Database. We conducted the selection process using a PRISMA flowchart, as seen in Fig. 1.

After removing duplicate results, 3,775 unique documents remained for further screening. The document selection process consisted of screening title and abstract, full-text review, and data extraction and synthesis. Ultimately, 15 articles were chosen for further analysis, meeting all the study’s criteria.

Document selection process

The document selection for further analysis followed a structured three-step process:

**Title and Abstract Screening:** In the initial phase, the titles and abstracts of all 3,775 documents were reviewed to evaluate their relevance to the study’s inclusion criteria, explicitly focusing on research related to inclusive education in higher education institutions in low-income countries. Six researchers independently screened the title and abstract of each identified citation for relevance. Following this, they each reviewed the full texts of each relevant article to ensure they met all eligibility criteria. In each step, the researchers discussed all disagreements until a consensus was reached. We included studies conducted in a low-income country, assessed the association between inclusive education, and were peer-reviewed.

**Full-Text Review:** For articles that met the preliminary criteria, a full-text review was conducted to evaluate the methodology, focus, and findings of each study. This step ensured that only the studies addressing the core aspects of inclusive education in higher education were considered.

**Data Extraction and Synthesis:** Documents that met the study’s criteria underwent thorough analysis. A systematic data extraction

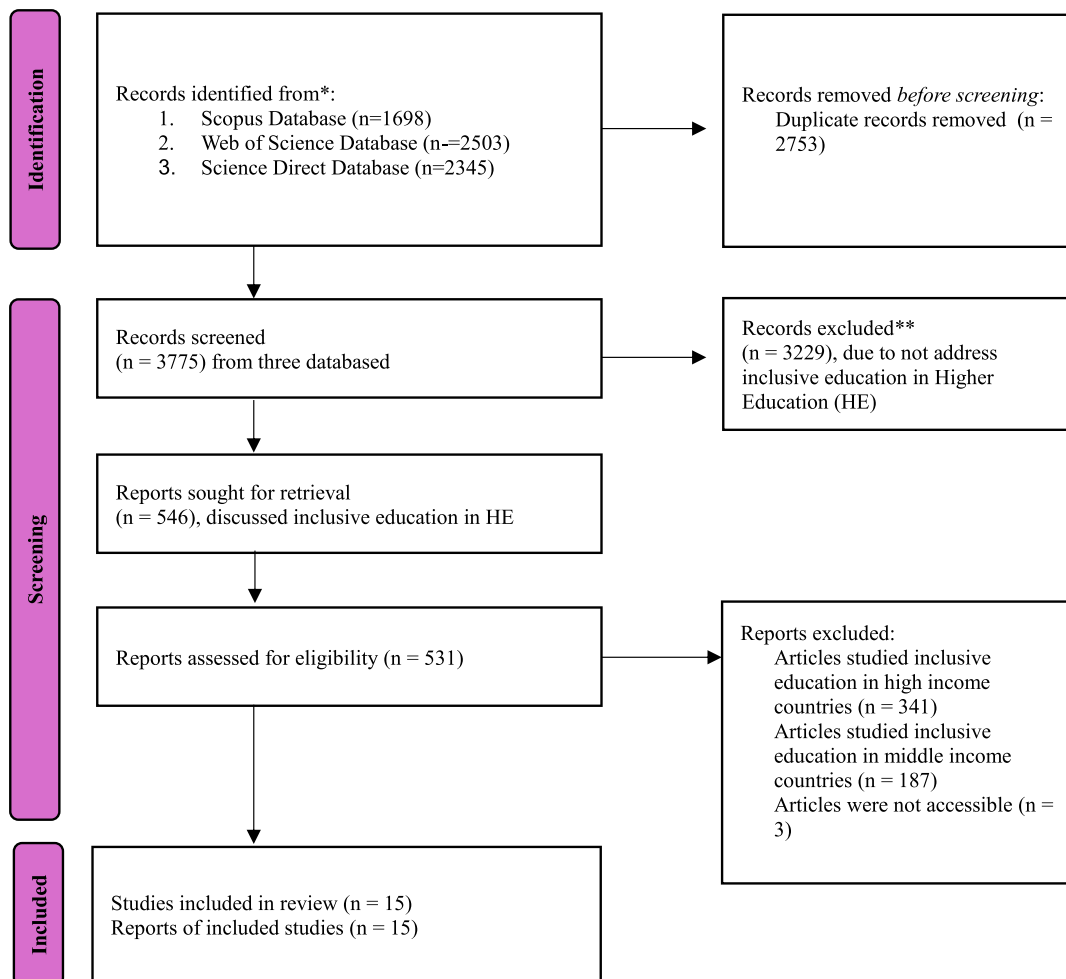


Fig. 1. PRISMA flowchart of study selection for systematic review on inclusive education on low income countries.

process was conducted, where information was recorded in detailed descriptor tables. Based on the selected studies, a synthesis of the findings followed to provide a comprehensive understanding of inclusive education practices in higher education within low-income countries.

#### *Inclusion and exclusion criteria*

This study selected articles based on the following criteria:

**Focus on Inclusive Education in Higher Education in Low-Income Countries:** The study considered articles focusing on inclusive education within higher education institutions in low-income countries. It excluded inclusive education studies related to Early Childhood Education (ECE), primary education, or non-formal educational settings. Similarly, studies addressing inclusive education in higher education outside of low-income countries were not included.

**Language of Publication:** Only articles published in English were included in the analysis. Articles published in languages other than English were excluded from the review process.

**Journal Indexing:** Articles had to be published in journals indexed by Scopus, Web of Science, or Science Direct, as these databases are globally recognized for indexing reputable academic publications.

**Type of Research:** Only empirical qualitative research was included in the analysis. Articles focusing on literature reviews, quantitative methods, or mixed methods were excluded from further consideration.

#### *Data extraction and synthesis*

Studies that met the inclusion criteria were extracted into a predefined descriptor table. This table captured vital information such as the authors, year of publication, research location, title of the study, research objectives, and findings. The results from the 15 selected documents were systematically analyzed and synthesized to offer a comprehensive understanding of inclusive education practices in higher education institutions within low-income countries.

## **Result**

African nations predominantly represent the discourse on inclusive education in low-income countries. From the collected documents, 15 journal articles reflect the state of inclusive education in higher education institutions across low-income countries, covering Algeria (1), Nigeria (8), Ethiopia (2), Somalia (1), Uganda (2), and the Democratic Republic of Congo (1). The focus of the study includes challenges and concepts of inclusion, inclusion policies, and best practices of inclusive education in higher education.

#### *Challenges and concepts of inclusive education in low-income countries*

Nigerian higher education has challenges in implementing inclusive education, namely low investment in education, widespread corruption and poverty, and resistance to change. Existing academic infrastructures need to be better suited to promote inclusive education in Nigeria [55]. Additionally, students with disabilities are disempowered in entrepreneurship [56], and classrooms are often not equipped with adequate facilities for disabled learners [57].

This context has led to the development of concepts such as Universal Design Compliance, Entrepreneurship Education for disabled students, inclusive classroom environments, and the Omulabi/Asabiyah philosophy. Universal Design Compliance promotes the development of higher education infrastructures that meet accessibility and usability needs for everyone, regardless of disability [55]. Entrepreneurship Education encourages the empowerment of disabled students to manage their small businesses [56]. Classroom Environment involves providing sign language interpreters, note-takers, overhead projectors, telecommunication devices for people who are hard of hearing, and sound systems compatible with hearing aids [57]. The Omulabi (Asabiyah) philosophy, derived from Ibn Khaldun, emphasizes local wisdom and encourages inclusion through cooperation and solidarity [58].

In Ethiopia, the disparity between law and practice and the digital divide poses significant challenges to inclusive education. Institutions such as Hawassa University have adopted the concept of "school for all," which seeks to meet the diverse needs of all students. This initiative includes ensuring access to educational resources, such as appropriate infrastructure, curricula, and other facilities [59].

In the Democratic Republic of Congo, inclusive education faces dilemmas such as low service demand, flawed service mechanisms, and controversial service quality. Universities in the Congo have responded by establishing Disability Resource Centers (DRC), crucial in ensuring inclusion and equality for disabled students, offering fair access to services and clear grievance procedures [60].

Inclusive education has been slow to develop in Somalia due to the nation's recovery from two decades of civil war. Both external and internal barriers to institutional progress persist. Elimination of Discrimination aims to remove discrimination both within and outside educational institutions by formulating and implementing laws that support the inclusion of all students, regardless of differences [61].

In Uganda, the lack of proper disability laws, limited financial support, narrowly defined eligibility criteria, pessimistic attitudes, discriminatory practices, and inaccessible locations remain significant barriers. Higher education institutions spearhead the Inclusive Educational Infrastructure movement, which aims to mainstream disability considerations at every level of education through legal and non-legal frameworks and inclusive infrastructure [62].

In summary, the discussion and concept of inclusive education in higher education within low-income countries are summarized in [Table 2](#). This table illustrates that inclusive education approaches in these African countries focus on eliminating discrimination,

developing supportive infrastructure for all students, enhancing accessibility, and ensuring full participation in education for students with various disabilities.

### *Inclusive education policies in higher education in Africa*

The Algerian government has issued various regulations to support inclusive education, such as Law No. 02-09 (2002) on the rights of persons with disabilities and Law No. 15-12 (2015) on child protection. Arib [63] notes that although many legal provisions guarantee the right to education for all children, barriers still exist, especially for students with disabilities.

The University of Bejaia is an example of implementing inclusive education policies by integrating students with various physical and behavioral disabilities into general classrooms. Many of these students have excelled in their studies, demonstrating that a positive attitude toward disability can create an inclusive environment. The establishment of La CASAM (cellule d'accompagnement, de sensibilisation, d'appui et de médiation) in 2011 has also played an essential role in supporting students with physical and mental challenges, giving them a platform to advocate for their needs within the university [63].

In Ethiopia, the government has taken significant steps in implementing inclusive education policies to ensure that all individuals, including those with special needs, can access quality education. These policies are based on the principles of justice and equality, enshrined in various regulations such as Article 25 of the Constitution of the Federal Democratic Republic of Ethiopia, which asserts that all people are equal before the law and that there shall be no discrimination based on race, nationality, or other social status. Furthermore, Article 41(5) mandates the provision of necessary rehabilitation and support for persons with disabilities. Ethiopia has also ratified the United Nations Convention on the Rights of Persons with Disabilities (CRPD), which emphasizes the importance of inclusion at all levels of education and the provision of reasonable accommodation for persons with disabilities, as stipulated in Article 24 of the CRPD [59].

Additionally, Ethiopia has signed the Marrakesh Treaty, which allows the reproduction of books in alternative formats, such as audio and braille, to facilitate educational access for persons with disabilities [64]. Implementing inclusive education policies in Ethiopian higher education institutions can be seen through various programs and initiatives. The National Action Plan for Persons with Disabilities (2012-2021) includes increasing the number of persons with disabilities in education and training teachers in special education. The Education Sector Development Program V (2015-2020) aimed to increase the participation of students with disabilities in higher education and ensure that all universities make their campuses accessible to all students. Ethiopia's higher education proclamation also mandates institutions to make buildings and other infrastructure accessible to students with physical disabilities [59].

In Nigeria, the government passed the Disability Act in 2018, establishing the rights of persons with disabilities to have equal and quality access to education. Article 1 of this law asserts that all individuals, regardless of their physical or mental condition, have the right to education. Likewise, the Nigerian Ministry of Education has emphasized the importance of inclusive education as part of the national education system [65].

Several Nigerian universities have developed support programs for students with disabilities, including providing physical accessibility on campuses and learning aids. For instance, the University of Lagos has launched an initiative to raise awareness about the needs of students with disabilities and provide training for lecturers on managing inclusive classrooms [66]. Moreover, the Nigerian government has collaborated with non-governmental organizations and international agencies to enhance access to education for persons with disabilities. Training and awareness programs have been implemented to encourage the active participation of students with disabilities in higher education [67].

In the Democratic Republic of Congo, one of the legal foundations supporting inclusive education is the Disability Act. The DRC has also ratified the CRPD, which emphasizes the importance of inclusion at all levels of education and the provision of reasonable accommodation for persons with disabilities. The CRPD provides an international framework that encourages countries to adopt policies

**Table 2**  
Inclusive education concepts in higher education institutions of low-income countries.

Country	Inclusive education concept	Description
Algeria	Special Educational Needs	Education directed at students with poor academic performance due to physical or mental disabilities.
Ethiopia	School for All	Education that accommodates the needs of all students, including access to adequate educational resources like infrastructure, curricula, and facilities.
Nigeria	Universal Design Compliance	Encourages the development of infrastructure that meets accessibility needs for all individuals, regardless of disability.
	Entrepreneurship Education	Empowers disabled students to manage small businesses.
	Classroom environment	Inclusive classrooms equipped with sign language interpreters, note-takers, overhead projectors, telecommunication devices for the hearing impaired, and compatible sound systems.
	Omulabi/Asabiyah Philosophy	Encourages the preservation of local wisdom and supports inclusion through cooperation and solidarity.
Congo	Disability Resource Centers (DRC)	DRCs play a pivotal role in ensuring inclusion and equality for disabled students by offering access to services and clear grievance procedures.
Somalia	Elimination of Discrimination	Seeks to remove discrimination within and outside educational institutions through supportive legal frameworks.
Uganda	Inclusive Educational Infrastructure	Mainstreams disability considerations at every level of education through both legal and non-legal frameworks, ensuring inclusive infrastructure.

and practices that support inclusive education. Universities in the DRC have developed academic support programs and counseling services to help students with special needs adapt to the academic environment [60].

In Somalia, the critical regulation supporting inclusive education is the Disability Act, adopted in 2019. This law establishes the rights of persons with disabilities to have equal and quality access to education. Article 1 of this law asserts that all individuals, regardless of their physical or mental condition, have the right to education. In addition, the Somali government has committed to ratifying the CRPD, which emphasizes the importance of inclusion at all levels of education and the provision of reasonable accommodation for persons with disabilities [61].

In Uganda, the critical regulation supporting inclusive education is the Disability Act, passed in 2006. This law establishes the rights of persons with disabilities to have equal and quality access to education. Article 4 of this law asserts that all individuals have the right to education without discrimination, and the government is responsible for providing the necessary facilities to ensure that students with disabilities can learn effectively. Uganda's National Education Policy also underscores the importance of inclusive education as part of the national education system. This policy encourages the development of programs that support students with disabilities, including teacher training to manage inclusive classrooms and providing necessary resources [62].

### *Best practice inclusive education support in higher education in Africa*

In several African universities, implementing inclusive education policies has become a primary focus in efforts to improve access to education for all individuals. Various institutions have developed support systems tailored to their resources. In Algeria, Abderahman Mira University has implemented several initiatives to create an inclusive atmosphere for all students. The university seeks to foster a democratic learning environment free from discrimination. As part of these efforts, faculty members work closely with students with disabilities to identify better ways to support their academic progress. Additionally, technical and administrative support staff have been appointed to assist students in their learning processes. The university has facilitated access to various pedagogical tools such as language laboratories, library databases, and amphitheatres. Disabled students are also included in the faculties' financial agenda and academic activities, ensuring their active participation in university life [63].

In Ethiopia, the government mandates that higher education institutions develop inclusive education policies. These institutions must accommodate disabled students and provide clear information about available accommodations. Recommendations are also made to establish appropriate testing procedures and to ensure that campus infrastructure is disability-sensitive. Higher education institutions must ensure that buildings, computers, and other facilities are accessible to disabled students [68].

In Nigeria, faculty members and librarians are encouraged to learn sign language to support students with hearing impairments [57]. Several universities, such as Federal University Abeokuta, Olabisi Onabanjo University (OOU), and Covenant University (CU), Ota, ensure that building repairs and routine maintenance meet universal design (UD) standards before being implemented (Sholanke et al. [55]). Furthermore, some Nigerian tertiary institutions have developed entrepreneurship policies that include provisions for students with disabilities. Integrating entrepreneurship education and support ecosystems in universities is designed to be more inclusive and accessible to disabled students [56].

In the Democratic Republic of the Congo, several higher education institutions have established Disability Resource Centers (DRCs) to support inclusive education. DRCs provide inclusion services and have clear procedures for complaints to ensure the quality of services provided to students with disabilities. This reflects a solid commitment to improving accessibility and the quality of education for disabled students [60].

In Somalia, the Ministry of Education, Culture, and Higher Education (MoECHE) supports inclusive education. The ministry coordinates educational administration and provides general directives to ensure a functional system. Financial management, administration, and strategic planning are handled by the ministry's six departments, which ensure that the needs of disabled students are integrated into national educational planning [61].

In Uganda, universities have focused on physical accessibility by assessing their infrastructure to ensure that all students, including those using wheelchairs or facing other mobility challenges, can navigate the campus. Peer-to-peer support is also an integral part of Uganda's university support systems, where non-disabled students are encouraged to assist their disabled peers in academic and social activities through mentorship programs. This not only enhances a sense of belonging for students with disabilities but also raises awareness and understanding among other students regarding the challenges their disabled peers face [69].

Makerere University in Uganda has integrated disabled students into its academic programs and developed support services such as academic assistance and counseling for students with special needs. These services include improving physical access to the campus and providing necessary learning tools [69].

In summary, Table 3 illustrates the development of the inclusive education support system in higher education of low-income countries, focusing on infrastructure development, administrative and academic support, and the competency development of lecturers and educational personnel.

## **Discussion**

The challenges and opportunities of inclusive education in higher education institutions in low-income African countries can be analyzed through the perspectives of policy implementation, resource availability, societal attitudes, and institutional capacity. This section explores how and why these factors influence the effectiveness of inclusive education. In countries such as Algeria, Ethiopia, Nigeria, Congo, Somalia, and Uganda, inclusive education is primarily implemented through legal frameworks, institutional policies, and targeted support programs. For instance, Algeria has established legal mandates to integrate students with special educational

needs, while Nigeria focuses on developing support systems, including sign language training for educators. In Ethiopia, inclusive practices are guided by government policies that align with international conventions, such as the UN Convention on the Rights of Persons with Disabilities (CRPD). Despite these efforts, implementation remains inconsistent due to inadequate infrastructure, insufficient educator training, and limited accessibility facilities.

Several factors contribute to the persistent challenges in implementing inclusive education: 1) Resource Limitations: Financial constraints hinder the development of accessible infrastructure, procurement of assistive technologies, and provision of specialized training for faculty members; 2) Societal Attitudes: Stigma and negative perceptions towards disabilities continue to impede the acceptance of inclusive practices, particularly in Nigeria and Somalia; 3) Policy-Practice Gap: In Ethiopia and Congo, despite progressive policies, there is a significant gap between legislation and its practical application, often due to lack of enforcement mechanisms and monitoring systems; 4) Political Instability: In countries like Somalia, ongoing political and economic instability disrupts the continuity of educational reforms and limits international support.

Despite these challenges, there are notable opportunities to enhance inclusive education: 1) International Collaboration: Partnerships with global organizations can provide technical and financial support, as seen in Ethiopia's engagement with international treaties; 2) Capacity Building: Teacher training programs focused on inclusive pedagogies and Universal Design for Learning (UDL) have shown promise in improving instructional practices; 3) Policy Development: Continuous refinement of inclusive education policies, alongside advocacy efforts, can shift societal attitudes and strengthen institutional commitments; 4) Peer-to-Peer Support Programs: In Uganda, peer mentorship initiatives have fostered supportive learning environments, highlighting the role of student communities in promoting inclusivity.

This study offers a novel contribution to the discourse on inclusive education by providing a contextualizing its implementation in low-income countries, particularly in African nations such as Algeria, Ethiopia, Nigeria, Congo, Somalia, and Uganda. Unlike previous studies that predominantly focused on normative definitions and global frameworks like the Salamanca Declaration [31], this research highlights the dynamic realities faced in these countries. It explores how inclusive education evolves amidst resource constraints, social stigma, and inadequate infrastructure. It offers a deeper understanding of how inclusivity is adapted to meet the specific challenges within diverse socio-economic and cultural environments.

In the context of higher education, this study advances existing knowledge by examining inclusive practices beyond policy formulation and technical provisions. While earlier research emphasized disability support units and accessibility technologies [45, 46], this study underscores the transformative role of faculty members, peer-to-peer support programs, and curriculum adaptation strategies as critical enablers of inclusion. By analyzing best practices across different countries, the research provides comparative insights into how higher education institutions can create inclusive environments that accommodate and empower students with special needs, fostering a more holistic approach to inclusive education.

Furthermore, the study uniquely addresses the intersection of inclusive education and the specific challenges low-income countries face. Moving beyond general discussions of poverty and underdevelopment [50], it identifies opportunities arising from international

**Table 3**  
Support systems for inclusive education developed in various low-income country universities.

Country	University name	Developed support system	Explanation
Algeria	Abderrahman Mira University	Democratic and Collaborative Environment Technical and Administrative Support Staff Facilitated Access to Learning Resources	The university fosters an equal and collaborative atmosphere for all students, especially those with disabilities, ensuring equal access to education. Technical and administrative staff assist disabled students in accessing education through special facilities and services. Disabled students are given easy access to learning tools such as language labs, libraries, and amphitheater classrooms.
Ethiopia	Hawassa University	Education Accommodations for Disabled Students Accessible Infrastructure	The Ethiopian government requires universities to provide accommodations such as appropriate testing and disability-friendly infrastructure. Universities ensure that facilities, such as buildings and computers, are accessible to disabled students.
Nigeria	Multiple Universities Lagos University Federal University Abeokuta Olabisi Onabanjo University (OOU) Covenant University (CU), Ota Various Tertiary Institutions	Sign Language Training for Faculty and Librarians Faculty Training Universal Design (UD) Implementation	Academic staff and librarians are trained in sign language to communicate with hearing-impaired students, promoting inclusion. Launched initiatives to raise awareness about the needs of disabled students and provide training for faculty in managing inclusive classrooms. Universities implement universal design standards to ensure that campus buildings are more inclusive and accessible to all students.
Kongo	Top 10 Universities	Inclusive Entrepreneurship Education Development Disability Resource Centers (DRC)	Universities develop inclusive entrepreneurship policies to support the participation of disabled students in entrepreneurship programs. DRCs provide inclusion services and have clear complaint procedures to ensure quality services for disabled students.
Somalia	Multiple Colleges and Universities	Education and Disability Accommodation Coordination	The Ministry of Education oversees educational administration to ensure that all planning strategies and quality assurance measures address disability needs.
Uganda	Multiple Universities Universitas Makerere	Affirmative Action Admission and Support Services	Universities admit disabled students through affirmative programs, although efforts to integrate inclusion and accommodation are still limited. Academic support and counseling services are provided to help students adjust to academic life.

collaborations, government-led affirmative actions, and innovative local initiatives. This perspective contributes to the literature by demonstrating that inclusive education can thrive despite financial and infrastructural limitations through adaptive policies, strategic partnerships, and community-driven efforts. The findings offer valuable models that can inform inclusive education strategies in other low-resource settings worldwide.

In conclusion, while inclusive education in low-income African countries faces significant barriers, strategic interventions targeting resource mobilization, societal awareness, and policy enforcement can create transformative opportunities for higher education institutions.

## Conclusion

This study has explored the complex landscape of inclusive education in higher education institutions across low-income African countries, highlighting persistent challenges and emerging opportunities. The findings reveal that while legal frameworks, institutional policies, and support programs are in place in countries such as Algeria, Ethiopia, Nigeria, Congo, Somalia, and Uganda, the practical implementation of inclusive education often faces significant barriers. Resource limitations, societal stigma, gaps between policy and practice, and political instability continue to hinder progress. These challenges underscore the need for a more comprehensive and context-sensitive approach to fostering inclusivity in higher education.

Despite these obstacles, the study identifies transformative opportunities that can enhance inclusive education in these contexts. International collaborations, capacity-building initiatives, policy development, and peer-to-peer support programs emerge as critical strategies for overcoming barriers and promoting inclusive learning environments. The role of faculty members, student communities, and adaptive curricula further demonstrates that inclusivity is not solely dependent on policy but also on the active engagement of educational stakeholders at all levels.

Ultimately, this research contributes to the broader discourse on inclusive education by offering a nuanced understanding of its implementation in resource-constrained settings. It highlights the importance of adaptive policies, strategic partnerships, and community-driven efforts in creating sustainable, inclusive practices. The insights gained from this study can serve as valuable models for other low-income countries seeking to transform higher education into a more equitable and accessible space for all learners, regardless of their abilities or backgrounds.

## Funding

This research was funded by the Research Organization for Social Sciences and Humanities, BRIN, Indonesia, under grants 7/III.7/HK/2024.

## CRediT authorship contribution statement

**Muhamad Murtadlo:** Conceptualization, Investigation, Writing – original draft, Data curation. **Hasan Albana:** Methodology, Investigation, Writing – original draft, Project administration. **Yunita Faela Nisa:** Investigation, Writing – review & editing. **Nurul Qolbi Izazy:** Investigation, Writing – original draft, Data curation. **Neneng Tati Sumiati:** Investigation, Writing – review & editing. **Mulia Sari Dewi:** Investigation, Writing – review & editing. **Haslinda Abdullah:** Writing – review & editing. **Chinhara Henry:** Writing – review & editing.

## Declaration of interest statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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