International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Inclusive Fashion Education for Persons with Disabilities: Challenges and Opportunities in Ghana

Phyllis Mensah[1], Andrew Adu Asabere[2] Abigail Nkansah[3]

[1]Assistant Lecturer, Fashion Design and Textiles Education, Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)
[2,3]Assistant Lecturer, Fashion Design and Textiles Education, Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)

Abstract
This study examines the challenges and opportunities of implementing inclusive education for persons with disabilities in Technical and Vocational Education and Training institutions. Using a qualitative design, data was collected through interviews, focus group discussions, observations and document analysis at selected TVET institutions across three different regions. The findings revealed persistent infrastructural pedagogical, attitudinal and institutional barriers that hinder the full participation of learners with disabilities. Key challenges include inaccessible facilities, a lack of adapted teaching method and materials, insufficient professional development for facilitators, and social exclusion within learning environment. Despite these obstacles the study identifies emerging opportunities such as adaptive technologies, offering inclusive pedagogy workshops and establishing peer support network all of which contribute to greater participation and autonomy for students with disabilities. The study recommends systemic investment in iaccessible infrastructure, ongoing capacity building for educators integration of devices, and technologies and stronger policy enforcement advancing inclusive fashion education in Ghana is essential for achieving equitable, high-quality education and empowering person with disabilities to contribute meaningfully to the creative economy and society at large.

Keywords: Inclusive Education, Technical and Vocational Education and Training (TVET), Persons with Disabilities, Fashion Design

1. Introduction

Access to quality education remains a fundamental human right and a vital driver of social and economic development (United Nations, 2023). The international commitment to inclusive education is incorporated in the United Nations Sustainable Development Goal 4 (SDG 4). This advocates for “inclusive and equitable quality education and promote lifelong learning opportunities for all”. (UNESCO, 2021). Responding to this, Ghana has instituted an Inclusive Education Policy to address the educational needs of all learners, including persons with disabilities (Ministry of Education, Ghana, 2021). There exist significant implementation gaps within technical and vocational education and training (TVET), especially in specialized disciplines such as fashion design.

Fashion design education in Ghana contributes significantly to youth employment, entrepreneurship, and national cultural identity (Boateng, 2020; Arthur & Mensah, 2022; World Bank, 2022). The sector not only provides vital skills for self-employment and business creation but also serves as a platform for creative expression and social mobility among young people. The Ghanaian government and various development partners have invested in expanding Technical and Vocational Education and Training (TVET) offerings in fashion design, with the aim of boosting economic growth and reducing youth unemployment (Anamuah-Mensah et al., 2021; World Bank, 2022).

Persons with disabilities continue to face multi-layered and persistent barriers in accessing and thriving within fashion TVET programs even though there are these strategic efforts. The challenges are not limited to infrastructural constraints such as inaccessible classrooms, lack of adapted tools and machinery, and inadequate transportation. The pedagogical issues extends to a shortage of instructors trained in inclusive methodologies, insufficient curriculum adaptation, and limited use of assistive technologies in teaching and assessment (Ackorlie et al., 2023; UNICEF Ghana, 2024). Attitudinal barriers agravate exclusion, as negative perceptions and low expectations regarding the capabilities of learners with disabilities persist among educators, peers, and even institutional leadership (Arthur & Mensah, 2022; Dzakpasu et al., 2023). Fashion design programs present unique challenges for learners with physical, visual, or hearing impairments due to the field's heavy reliance on practical, tactile, and visual skills. especially where pattern drafting and garment construction often require fine motor coordination, visual-spatial awareness, and manual dexterity, which can be difficult for learners with specific disabilities if appropriate supports are not in place (Shah, 2018; World Bank, 2022). Moreover, the lack of accessible instructional materials, such as Braille patterns or audio-described demonstrations, limits the participation of students with visual impairments. In a similar situations, students with hearing impairments may struggle to access verbal instructions and feedback in environments where sign language interpretation or captioning is insufficiently available (UNESCO, 2021; UNICEF Ghana, 2024).

International and regional advancements in adaptive technologies, such as tactile sewing guides, screen readers, voice-activated design software, and sign language interpretation, demonstrate that inclusive participation in fashion education is attainable when supported by targeted policies, resources, and professional development (UNICEF Ghana, 2024). Inclusive pedagogy is characterized by differentiated instruction in accordance with the learners needs, the application of Universal Design for Learning (UDL) principles, and collaborative problem-solving, has been shown to enhance learning outcomes and foster a more supportive environment for all students, including those with disabilities (Florian & Black-Hawkins, 2011; Florian & Spratt, 2020; World Bank, 2022).

A big gap still remains between the policy aspirations outlined in Ghana's Inclusive Education Policy and the actual practices within fashion TVET institutions. Implementation is hindered by resource limitations, inadequate institutional preparedness, and the slow pace of attitudinal change among stakeholders (Dzakpasu et al., 2023; World Bank, 2022). As a result, persons with disabilities remain systematically underrepresented in fashion TVET, limiting their opportunities for social and economic advancement and perpetuating cycles of exclusion.

This study explores the extent, challenges, and opportunities for implementing inclusive fashion education within Ghana's TVET institutions. It critically examines issues of accessibility, pedagogy, institutional preparedness, and policy support, aiming to identify both systemic barriers and enabling factors.

The objective is to identify the challenges: structural, attitudinal, pedagogical, and technological affecting inclusive fashion education and to explore opportunities and best practices for making fashion education

more inclusive and accessible

2. Literature Review

2.1 Conceptualizing Inclusive Education

2.1.1 Definitions and Principles of Inclusive Education

Inclusive education is increasingly defined as a systemic approach that ensures that all learners, irrespective of their physical, intellectual, social, emotional, linguistic, or other conditions, can participate fully and equally in the educational process (UNESCO, 2021). The core principles of inclusive education emphasize removing barriers to learning, promoting diversity as an asset, and committing to equity and social justice within educational settings (Ainscow, 2020). In Ghana, inclusive education has been positioned not only as a moral and legal imperative but also as a practical strategy for national development and social cohesion (Amoako, 2022). Effective inclusive education requires reforms at multiple levels, including policy, curriculum, pedagogy, and community engagement, as well as a re-examination of beliefs and attitudes about difference and disability (UNICEF Ghana, 2024).

2.1.2 Models of Disability: Medical, Social, and Rights-Based Approaches

The framing of disability within education has evolved significantly, shifting from a medical model, in which disability is viewed as a deficit or problem residing within the individual, to a social model, which locates disability in the interaction between individuals and societal barriers (Shakespeare et al., 2021). The medical model often justifies segregated and remedial approaches, focusing on diagnosis and treatment, whereas the social model advocates for systemic change, environmental accessibility, and the dismantling of social and attitudinal barriers (Dzakpasu et al., 2023). More recently, the rights-based approach to disability has gained prominence, emphasizing the rights of persons with disabilities to participate equally in all aspects of life, including education, and aligning with international instruments such as the UN Convention on the Rights of Persons with Disabilities (CRPD) (UN, 2023). This shift has informed both global and Ghanaian policy, leading to greater focus on inclusive practices, anti-discrimination measures, and participatory decision-making (Amoako, 2022).

2.1.3 Universal Design for Learning (UDL) and Inclusive Pedagogy

Universal Design for Learning (UDL) is an educational framework that guides the development of flexible learning environments that accommodate individual learning differences (Meyer et al., 2021). UDL emphasizes the proactive design of curricula, materials, and assessments to provide multiple means of representation, engagement, and expression, thereby meeting the diverse needs of all learners from the outset (UNESCO, 2021). Inclusive pedagogy, closely aligned with UDL, advocates teaching strategies that respond to learner diversity without requiring separate or additional interventions (Florian & Spratt, 2020). Contemporary research in Ghana and beyond demonstrates that when facilitators are equipped with UDL principles and inclusive pedagogical skills, educational outcomes for students with disabilities significantly improve, and classroom environments become more participatory and supportive (Amoako, 2022; Dzakpasu et al., 2023). However, the effective implementation of UDL and inclusive pedagogy requires sustained professional development, collaborative planning, and institutional commitment at all levels (UNICEF Ghana, 2024).

2.2 Policy Context for Inclusion

2.2.1 International Frameworks

The global policy landscape for inclusive education is shaped by foundational international instruments

that advocate for the rights of persons with disabilities to equitable educational opportunities. Chief among these is the United Nations Sustainable Development Goal 4 (SDG 4), which calls for "inclusive and equitable quality education and lifelong learning opportunities for all" (United Nations, 2023). SDG 4 explicitly emphasizes the need to eliminate disparities and ensure equal access to all levels of education and vocational training for vulnerable populations, including persons with disabilities. Complementing SDG 4, the United Nations Convention on the Rights of Persons with Disabilities (CRPD), particularly Article 24, mandates signatory states to ensure "an inclusive education system at all levels and lifelong learning," and to provide reasonable accommodations and support measures tailored to individual needs (UN, 2023).

These international frameworks have established a normative standard for educational inclusion, influencing national policy development and driving global monitoring efforts. Recent reports highlight progress in expanding access to education for persons with disabilities but also underline persistent gaps, especially in technical and vocational education (UNESCO, 2021; UNICEF, 2021). The call for inclusive approaches extends beyond access, advocating for transformation in curriculum, pedagogy, and educational environments to ensure meaningful participation for all learners.

2.2.2 Ghana's Inclusive Education Policy

In accordance with its international obligations, Ghana launched the Inclusive Education Policy in 2015, which was subsequently reviewed in 2021, as a strategic response to address the marginalization of learners with disabilities in the country's educational system (Ministry of Education, Ghana, 2021; Ghana Education Service [GES], 2022). The policy's central objectives include removing barriers to learning, providing reasonable accommodations, and promoting participation, achievement, and well-being for every learner, regardless of ability or background (UNICEF Ghana, 2024; Okyere et al., 2022). Key provisions mandate the integration of inclusive education principles into curriculum design, teacher training, school infrastructure, and assessment practices (Anthony, 2019). The policy also calls for the active engagement of families, communities, and other stakeholders in fostering inclusive educational environments (UNICEF Ghana, 2024; Opoku et al., 2020).

Despite these firm policy commitments, Ghana continues to face significant challenges in translating policy into practice. Implementation progress has been hampered by limited financial and human resources, insufficient availability of assistive technologies, and the uneven preparedness of educational institutions (Dzakpasu et al., 2023; Agbenyega, 2007). Additionally, attitudinal barriers among educators, school administrators, and communities persist, often resulting in the exclusion of learners with disabilities from mainstream and vocational education settings (Ackorlie et al., 2023; Opoku et al., 2020). Monitoring and evaluation mechanisms have also been identified as areas needing strengthening to ensure accountability and continuous improvement (UNICEF Ghana, 2024; GES, 2022).

2.2.3 Specific Policies for TVET and Creative Industries

While Ghana's Inclusive Education Policy provides a broad framework for the inclusion of persons with disabilities, sector-specific policies and guidelines for Technical and Vocational Education and Training (TVET) have increasingly addressed the need for equity and accessibility. The recent "TVET Transformation Agenda" and related policy documents emphasize the importance of making vocational programs, including those in the creative industries such as fashion design, accessible and responsive to the needs of diverse learners (Anamuah-Mensah et al., 2021; World Bank, 2022). These policies advocate for the adaptation of infrastructure, the provision of assistive devices, and the development of inclusive curricula tailored to the practical nature of TVET disciplines. (Abreh, M. K. 2025)

Nonetheless, implementation at the institutional level remains inconsistent, with many TVET centers lacking the resources, expertise, and systems required for full inclusion (Ackorlie et al., 2023). Recent studies highlight a continued gap between policy intentions and the realities experienced by learners with disabilities, particularly in specialized fields like fashion design, where practical and visual skills are emphasized and adaptive supports are often insufficient (Dzakpasu et al., 2023; Arthur & Mensah, 2022; Ogoe et al, 2023)). Bridging this gap necessitates coordinated action across government, educational institutions, industry, and civil society to ensure that policy frameworks translate into tangible opportunities for all learners

2.3 The State of Inclusion in Ghanaian TVET

2.3.1 Progress

Ghana has made notable strides toward fostering inclusion within its Technical and Vocational Education and Training (TVET) system. Policy reforms, such as the Inclusive Education Policy and the TVET Transformation Agenda, have prioritized the integration of learners with disabilities into mainstream vocational training settings (Ministry of Education, Ghana, 2021; Anamuah-Mensah et al., 2021). There has been increased investment in upgrading TVET infrastructure, revising curricula to be more responsive to diverse learning needs, and implementing in-service teacher training on inclusive methodologies (World Bank, 2022). Some institutions have piloted the use of assistive technologies and adapted learning materials, and there are growing partnerships between government, NGOs, and international agencies to promote accessible education (UNICEF Ghana, 2024). These efforts reflect a broader national and global commitment to equity and the realization of SDG 4's mandate for inclusive and equitable quality education.

2.3.2 Gaps

Despite these positive developments, significant gaps persist in achieving full inclusion in Ghanaian TVET. Recent studies indicate that many TVET centers remain ill-equipped to accommodate learners with physical, sensory, or intellectual disabilities (Ackorlie et al., 2023; Dzakpasu et al., 2023). Infrastructural barriers, such as inaccessible buildings, a lack of specialized equipment, and transportation difficulties, continue to hinder participation. Pedagogical challenges also remain, including a shortage of instructors trained in inclusive teaching strategies, limited curricular adaptation, and insufficient use of assistive technologies (Amoako, 2022). Furthermore, attitudinal barriers manifested as stigma, low expectations, and institutional inertia persist at various levels, affecting both admission and retention of learners with disabilities (Arthur & Mensah, 2022). Sector-wide monitoring and evaluation mechanisms are often weak, making it difficult to assess progress and enforce accountability for inclusion (UNICEF Ghana, 2024).

2.3.3 Sector-Specific Analysis: Fashion Design

The fashion design segment of TVET illustrates the broader challenges and opportunities of inclusion in Ghana. While the sector is recognized for its potential to drive youth employment and entrepreneurship, it remains notably inaccessible to persons with disabilities (Boateng, 2020; Arthur & Mensah, 2022). Fashion design programs often demand high levels of manual dexterity, visual acuity, and tactile skills. As a result, learners with physical, visual, or hearing impairments face compounded barriers, including the lack of adapted tools (e.g., tactile sewing guides, Braille patterns), limited accessible instructional materials, and insufficient accommodations for practical assessments (Ackorlie et al., 2023; Abreh, M. K. 2025)).

Some progress has been made through pilot initiatives introducing adaptive technologies and efforts to sensitize instructors to inclusive pedagogy. However, such interventions remain isolated, and the sector continues to lag in the systematic provision of accessible infrastructure and resources (Ogoe et al, 2023). The lack of sector-specific guidelines and sustained investment means that, for many learners with disabilities, meaningful participation in fashion design TVET remains out of reach. This underrepresentation not only perpetuates social and economic exclusion but also limits the fashion industry's potential to benefit from diverse creative perspectives.

2.4 Theoretical Frameworks Guiding Inclusion

Inclusive education research and practice are grounded in several interrelated theoretical frameworks that inform policy, pedagogy, and institutional transformation.

2.4.1 Social Model of Disability

The social model of disability, originally articulated by Michael Oliver (1983), represents a paradigm shift from viewing disability as an intrinsic impairment (the medical model) to understanding disability as the result of social, environmental, and attitudinal barriers that restrict participation (Oliver, 1983; Shakespeare et al., 2021). Within this framework, the focus is on removing obstacles in the physical and social environments, such as inaccessible infrastructure, discriminatory attitudes, and inflexible curricula, to enable full participation by persons with disabilities (Ogoe et al, 2023). The social model underpins both international conventions and Ghana's policy commitments, emphasizing the need for systemic change rather than individual adaptation.

The social model of disability is highly relevant to this study as it shifts attention from the individual limitations of persons with disabilities to the societal and institutional barriers that impede their participation in fashion TVET programs. By adopting this perspective, the study foregrounds the role of inaccessible infrastructure, unsupportive policies, and negative societal attitudes as primary contributors to exclusion in fashion education, rather than viewing disability as a deficit residing within the learner. This model underpins the research approach by framing the investigation around identifying and addressing these external barriers such as the lack of adapted equipment, inaccessible classrooms, and inflexible curricula which are especially prevalent in Ghana's fashion TVET sector (Arthur & Mensah, 2022; Ogoe et al, 2023). The social model also aligns the study with international conventions and Ghana's own inclusive policy commitments, emphasizing the need for systemic change in educational environments to realize true inclusion.

Universal Design for Learning (UDL)

Universal Design for Learning (UDL) is an educational framework that advocates for proactive curriculum and environment design to accommodate the diverse needs of all learners from the outset (Meyer et al., 2021; UNESCO, 2021). UDL is guided by three primary principles: providing multiple means of engagement, representation, and expression. In the context of vocational and fashion education, UDL encourages the use of varied instructional materials, flexible assessment strategies, and the integration of assistive technologies to support accessibility (Florian & Spratt, 2020). UDL's emphasis on flexibility and anticipation of learner diversity aligns closely with inclusive educational reforms in Ghana.

UDL provides a practical framework for the study's examination of how teaching, curricula, and assessment practices in fashion TVET can be adapted to meet the diverse needs of all learners, including those with disabilities. By advocating for the integration of multiple means of engagement, representation, and expression, UDL guides the study's analysis of existing instructional strategies and the potential for

implementing accessible teaching materials, varied assessment methods, and the use of assistive technologies in the fashion education context (Meyer et al., 2021; Florian & Spratt, 2020). The study utilizes UDL principles to evaluate the flexibility of current practices and to recommend proactive changes that could make learning environments more inclusive and supportive, in line with Ghana's inclusive education reforms.5

2.4.2 Inclusive Pedagogy Theory

Inclusive pedagogy, a theory primarily developed by Florian and Black-Hawkins (2011), extends beyond differentiation by advocating teaching practices that address the needs of all learners without marginalizing or segregating them (Florian & Spratt, 2020; Florian & Black-Hawkins, 2011). This theory emphasizes teachers' belief in every student's capacity to learn and the importance of collaborative, reflective practice. Inclusive pedagogy involves designing lessons that invite participation and engagement from all, adapting approaches as necessary, and fostering classroom communities where diversity is viewed as an asset. Research in Ghana and similar contexts indicates that when educators adopt inclusive pedagogy, outcomes improve for students with and without disabilities, particularly in practical and creative fields such as fashion design (Amoako, 2022).

Inclusive pedagogy theory informs the study's focus on teacher beliefs, classroom practices, and learning community dynamics. This framework encourages the exploration of how instructors in fashion TVET perceive and address learner diversity, and whether they design lessons and learning activities that invite participation from all students without marginalization or segregation (Florian & Spratt, 2020; Florian & Black-Hawkins, 2011). By examining the extent to which educators foster collaborative, reflective, and asset-based classroom cultures, the study assesses the current state of inclusive practice and identifies opportunities for professional development. Research evidence from Ghana and comparable contexts suggests that when educators embrace inclusive pedagogy, educational outcomes improve for both students with and without disabilities, an insight directly relevant to the fashion design field, where creativity and hands-on engagement are central (Amoako, 2022).

2.5 Identified Gaps in the Literature

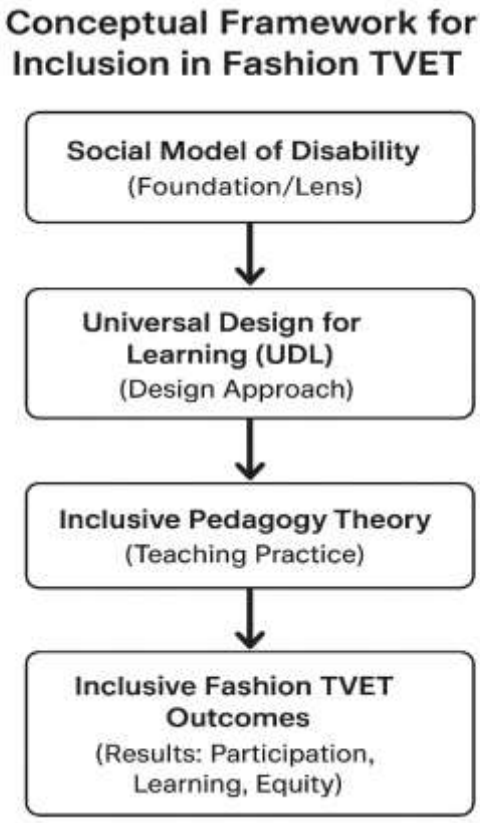
Despite increasing attention to inclusive education in Ghana, several empirical and conceptual gaps remain. First, much of the existing research focuses on primary and secondary education, with considerably less attention to inclusion within TVET and even less within sector-specific fields such as fashion design (Ackorlie et al., 2023; Dzakpasu et al., 2023). Where studies on TVET do exist, they often provide general overviews rather than in-depth analyses of particular disciplines, resulting in a lack of granular understanding of the unique barriers and opportunities in creative and skills-based sectors.

Additionally, while policy documents emphasize the importance of inclusion, there is limited empirical evidence on the actual implementation of inclusive practices in fashion TVET programs, including the availability of adaptive technologies, instructors' preparedness, and the lived experiences of learners with disabilities (UNICEF Ghana, 2024). The literature also points to a need for contextually relevant frameworks that address both structural and attitudinal barriers and that inform sustainable, scalable models of inclusion.

Given these gaps, the study specifically examines the challenges and enabling conditions for inclusive fashion education within Ghana's TVET sector. This research provides evidence to inform policy, guide institutional reforms, and contribute to the broader goal of educational equity and social inclusion.

2.6 Conceptual framework

The framework is anchored in the Social Model of Disability, which establishes a systemic perspective by positing that disability arises primarily from external barriers within society rather than from individual impairments. Building on this foundation, the principles of Universal Design for Learning (UDL) offer a set of proactive strategies for designing curricula and learning environments that accommodate the diverse needs of all learners from the outset. The Inclusive Pedagogy Theory further informs the framework by addressing the pivotal roles of teacher beliefs, instructional practices, and the cultivation of supportive, collaborative classroom communities. Collectively, these theoretical perspectives inform the pursuit of inclusive outcomes in Fashion TVET, specifically by promoting increased participation, enhanced learning experiences, and greater equity for all students.



Researchers' own construct (2025)

3. Methodology

3.1 Research Design

This study employs an exploratory qualitative research design to examine the challenges and opportunities associated with inclusive fashion education for persons with disabilities in Ghana's TVET institutions. The qualitative approach is chosen for its strength in capturing rich, in-depth insights into participants' lived experiences, perceptions, and the complex socio-cultural and institutional factors shaping inclusion in fashion TVET (Creswell & Poth, 2018; UNICEF Ghana, 2024).

3.2 Study Setting and Population

The research was conducted at selected public and private TVET institutions offering fashion design programs across three regions of Ghana: Greater Accra, Ashanti, and Northern Regions. These settings

are chosen to reflect a range of urban and rural contexts, socio-economic backgrounds, and levels of policy implementation.

Participants included: Learners with disabilities enrolled in fashion TVET programs, Fashion design instructors and administrative staff, Institutional leaders (such as principals or coordinators), Policymakers and representatives from the Ministry of Education or TVET Service and Representatives from disability advocacy organizations

3.3 Sampling Strategy

Purposive sampling was employed to select institutions with active fashion design programs and a demonstrated commitment or experience in enrolling students with disabilities. Within each institution, participants will be selected to reflect maximum variation in terms of disability type, gender, age, and roles (learners, staff, leaders).

The anticipated sample size is: 15 learners with disabilities, 10 instructors and staff, 5 institutional leaders and 3 policymakers and advocates. Total sample is thirty (30)

Sampling continued until data saturation was reached that is, until no new substantial themes emerge.

3.4 Data Collection Methods

3.4.1. Semi-Structured Interviews:

In-depth, individual interviews will be conducted with learners with disabilities, instructors, institutional leaders, and policymakers. Interview guides will be informed by the social model of disability, Universal Design for Learning, and inclusive pedagogy theory. Questions will explore experiences of accessibility, teaching and learning practices, institutional support, perceived barriers, enabling factors, and recommendations for improvement. Interviews will be audio-recorded (with consent) and transcribed verbatim.

3.4.2. Focus Group Discussions (FGDs):

FGDs with learners and, separately, instructors, will facilitate the sharing of collective experiences, highlight common barriers and successes, and stimulate dialogue around possible solutions and best practices.

3.4.3. Non-Participant Observations:

Observations will be carried out in classrooms, workshops, and common areas using an observation checklist. The focus will be on physical accessibility, classroom interactions, use of inclusive pedagogy, and visible adaptations or supports for learners with disabilities.

3.4.4. Document Analysis:

Relevant policy documents, institutional guidelines, and curricular materials will be reviewed to assess the extent to which inclusive education principles are embedded and operationalized in fashion TVET.

3.5 Ethical Considerations

Ethical approval was obtained from the relevant Institutional Review Board and TVET authorities. Informed consent was secured from all participants, with assurances of confidentiality, anonymity, and the right to withdraw without penalty. Accessibility accommodations (such as sign language interpreters or Braille information) was provided to ensure all participants can engage fully and comfortably.

3.5.1Trustworthiness

To ensure credibility and trustworthiness, the study employed several strategies throughout the research process. Triangulation of data sources will be employed by collecting information from interviews, focus

group discussions, observations, and document analysis, thereby enabling validation and cross-verification of findings. Member checking will be conducted by sharing preliminary findings with participants to confirm the accuracy and relevance of the interpretations.

3.6 Data Analysis

Data collected from interviews and focus group discussions were transcribed verbatim and analyzed thematically, as outlined by Nowell et al. (2017). Observation and document analysis supported in the data analysis. The study followed a systematic process:

3.6.1 Familiarization

Transcripts were read multiple times to ensure immersion in the data.

3.6.2 Initial Coding: Meaningful segments of text were highlighted and assigned descriptive codes using both inductive (data-driven) and deductive (theory-driven) approaches.

Theme Development: Theme Development: Codes were reviewed and grouped into potential themes that captured significant patterns related to inclusion and exclusion in fashion TVET. For example, codes such as "inaccessible classrooms," "lack of adapted equipment," and "positive peer support" were organized under broader themes like "Barriers to Participation" and "Facilitators of Inclusion." This approach ensured that the thematic analysis was grounded in concrete evidence from participant responses.

Reviewing Themes: Themes were refined to ensure coherence, distinctness, and accurate representation of the coded data.

Defining and Naming Themes: Each theme was clearly defined and named to reflect its essence and relevance to the research questions such as Infrastructural Barriers, Pedagogical and Curriculum-Related Challenges, Attitudinal Barriers and Social Exclusion, and Institutional Preparedness and Support

Reporting: The final themes provided the organizational structure for presenting the findings.

This rigorous approach ensured that the analysis remained grounded in participants' experiences while also being informed by the study's theoretical frameworks (Social Model of Disability, Universal Design for Learning, and Inclusive Pedagogy). The following sections present the major themes generated from this analysis.

4. Findings

4.1 Infrastructural Barriers

Across all three study regions, learners with disabilities consistently identified physical inaccessibility as a significant barrier to participation in fashion TVET programs. Many institutions lacked ramps, elevators, or adapted workstations. One visually impaired student shared,

"The sewing machines are not arranged in a way that I can move around easily. I need someone to guide me to my seat every day." (PM001)

A wheelchair user from the Ashanti region reported,

"There are stairs everywhere, but no ramps. I always have to ask someone to help me carry my chair or miss some practical lessons." (PM002)

Some fashion design classrooms were located on upper floors without elevator access, rendering them inaccessible to some students. As one participant explained,

"My class is on the second floor, and there is no lift. So, I sometimes have to stay downstairs and miss the practical work." (PM004)

Another learner with a mobility impairment described the challenge of using standard-height worktables and sewing machines:

"The tables are too high for me to use from my wheelchair. I have to wait until someone is free to help adjust the chair, or sometimes I watch instead of doing the work myself." (PM005)

Several students noted the lack of accessible restrooms as an additional deterrent to regular attendance. One student said,

"There is no toilet I can use in the building. If I need to go, I have to wheel myself a long distance to another block, which is tiring and sometimes embarrassing." (PM006)

Lighting and signage also posed challenges for students with visual impairments. A student commented,

"The hallways are dark, and there are no tactile signs. Sometimes I get lost or bump into things." (PM007)

Instructors and staff acknowledged these limitations, with one instructor admitting,

"We try our best, but the buildings were not designed for disabled students. We have no funds to make big changes, so we help as much as we can." (PM008)

Another administrator expressed concern about safety in emergencies:

"If there were a fire, I do not know how students with disabilities would get out quickly. This worries me." (PM009)

These infrastructural challenges not only hinder participation in daily activities but also affect students' sense of autonomy and belonging within the learning environment. The persistent lack of accessible facilities underscores the need for systemic investment and policy enforcement to advance true inclusion in Ghana's fashion TVET sector.

4.2 Pedagogical and Curriculum-Related Challenges

Most participants reported that teaching methods and materials were not adapted to diverse learning needs. Instructors primarily used verbal explanations and blackboard demonstrations, which disadvantaged students with hearing or visual impairments. An instructor stated,

"Honestly, I have not received any training on how to teach students with disabilities. I try to repeat myself or ask their friends to help." (PM010)

One student with a hearing impairment explained,

"When the teacher faces the board, I cannot follow what is being said. There is no sign language interpreter, and the notes are sometimes not clear." (PM011)

Another visually impaired student shared,

"The instructions are written on the board, but I cannot see them clearly. If no one reads it out for me, I miss important information." (PM012)

Students with disabilities also struggled with practical assessments. As one student noted,

"During practical exams, I need more time, but sometimes the teachers do not understand and rush me." (PM013)

A student with a mobility impairment described difficulties in participating in hands-on activities:

"Sometimes the teacher asks us to move quickly from one workstation to another, but I need more time. I feel like I am always behind." (PM014)

There was also a lack of accessible learning materials and resources. One instructor admitted,

"We use the standard textbooks and handouts. There are no Braille materials or large print versions for students who need them." (PM015)

Students with disabilities frequently relied on classmates for assistance, as another shared,

"My friend helps me take notes and explains things after class. Otherwise, I would not be able to keep up." (PM016)

Few instructors reported adapting their teaching methods beyond informal peer support. As one staff member reflected,

"I am willing to help, but I do not know any special techniques. I wish there were workshops or training for us." (PM017)

Furthermore, assessment practices rarely accommodate different needs. A student remarked,

"If I ask for extra time, sometimes the teacher says no because 'everyone must finish together.' It makes me anxious during tests." (PM018)

These pedagogical and curriculum-related challenges highlight the urgent need for professional development, accessible materials, and flexible teaching and assessment strategies to support learners with disabilities in fashion TVET programs.

4.3 Attitudinal Barriers and Social Exclusion

Negative attitudes and low expectations towards learners with disabilities were pervasive across the participating fashion TVET institutions. Several students described feeling underestimated or overlooked by both teachers and peers, which often led to reduced opportunities for meaningful participation. One learner recounted,

"Some teachers think we cannot do the work. They give us easier tasks or sometimes ignore us during class." (PM019)

Some instructors reported limited confidence in the abilities of students with disabilities, which influenced how they assigned classroom and practical work. As one teacher explained,

"I am sometimes afraid that if I give them the same assignments as others, they might not manage. It is not because I do not care, but I do not want them to fail." (PM020)

Students also reported that these attitudes affected their self-esteem and motivation to engage fully in their studies. A visually impaired learner shared,

"When my teacher skips over me or lowers the standard for me, I feel like I do not belong or that my efforts do not matter." (PM021)

Social exclusion extended beyond the classroom. Some students described feeling isolated during group activities, lunch breaks, or school events. Another student reflected,

"It is lonely sometimes. Other students avoid sitting with me, maybe because they think I will slow them down." (PM022)

Another learner with a physical impairment described the struggle to make friends,

"I wish I could join in group work more, but sometimes my classmates just form their groups and leave me out." (PM023)

Despite these challenges, there were also examples of positive attitudes and willingness to support inclusion. Some instructors expressed a desire to do more if provided with appropriate support. As one instructor said,

"I am open to learning how to teach everyone. If we had training or resources, I believe we could make things better for all our students." (PM024)

A few students also mentioned supportive peers who advocated for their inclusion, as a student shared,

"There are a few classmates who always encourage me and make sure I am part of the group. That makes a big difference." (PM025)

These findings underscore the significant role that attitudes play in shaping the experiences of learners with disabilities, highlighting the need for awareness-raising, sensitivity training, and intentional efforts to foster a more inclusive and supportive learning environment within Ghana's fashion TVET sector.

4.4 Institutional Preparedness and Support

Administrative staff and institutional leaders widely acknowledged limited preparedness to implement inclusive education in fashion TVET programs. Many cited a lack of dedicated funding, insufficient training, and weak policy enforcement as persistent barriers to genuine inclusion. A principal stated,

"We have the policy documents, but there is no money for ramps or special equipment. We do what we can, but it is not enough." (PM026)

Several administrators described the challenge of balancing policy expectations with practical constraints, including limited human resources and competing priorities. As one vice-principal explained,

"We want to admit more students with disabilities, but our staff are not trained, and our facilities are not ready. Sometimes it feels like we are set up to fail." (PM027)

Institutional leaders also expressed frustration about the lack of ongoing guidance and monitoring from higher authorities.

"There is little follow-up after policies are announced. We are left on our own to figure things out," commented one program coordinator. (PM028)

Disability advocates corroborated these challenges, highlighting the gap between national policy and day-to-day realities in TVET centers. One advocate shared,

"On paper, Ghana is committed to inclusive education, but in practice, most schools struggle to provide even the basics for disabled students." (PM029)

Instructors also spoke about the need for professional development and resource support.

"I am willing to make my lessons more inclusive, but I need training and materials. Right now, we improvise," said one fashion design teacher. (PM030)

Some institutions had attempted to address gaps through partnerships with NGOs or donor organizations, but such efforts were often short-term or limited in scale.

"We had a project last year that gave us a few tools and did some training, but when it ended, we went back to the old ways," noted an administrator. (PM031)

Overall, these findings highlight that while institutional leaders and staff are generally aware of the value of inclusive education, their ability to deliver on these goals is constrained by systemic issues that require coordinated action, sustained funding, and stronger accountability mechanisms

4.5 Opportunities and Enablers

Despite the considerable challenges faced by learners with disabilities in fashion TVET, participants across the study highlighted several emerging opportunities and enabling factors that supported greater inclusion and participation.

One notable area of progress has been the piloting of adaptive technologies in some institutions. Tools such as tactile sewing guides, audiobooks, and large-print instructional materials were introduced with overwhelmingly positive feedback from students. As one visually impaired student enthused,

"When the school brought in a tactile ruler, it helped me so much with measuring fabrics. I felt independent for the first time." (PM032)

These innovations not only facilitated practical learning but also contributed to students' sense of autonomy and confidence. The introduction of adaptive tools, even on a small scale, demonstrated the potential to reduce barriers significantly.

Another promising development was the provision of inclusive pedagogy workshops for instructors. Those who participated described a noticeable shift in their teaching confidence and student engagement. One instructor reflected,

"After the training, I started using different ways to explain tasks, not just talking. I saw my students were more engaged." (PM033)

This observation underscores the value of continuous professional development in equipping educators with strategies to address diverse learning needs and to foster a more inclusive classroom environment.

Peer support networks among students with disabilities also emerged as a significant enabling factor. These informal groups provided emotional, social, and academic support, often filling gaps left by limited institutional resources. As one participant described,

"We formed a small group to help each other. Sometimes, what the teachers cannot explain, we figure out together." (PM034)

Such networks not only helped overcome practical challenges but also fostered a sense of solidarity and belonging among students who might otherwise feel isolated.

5. Discussion

5.1 Infrastructural Barriers

The findings from this study highlight that infrastructural barriers remain one of the most significant impediments to the participation and success of learners with disabilities in Ghanaian fashion TVET programs. This aligns with extensive literature documenting that physical inaccessibility is a persistent and cross-cutting challenge in educational settings across sub-Saharan Africa (Ackorlie et al., 2023; Dzakpasu et al., 2023 Abreh, 2025; Ogoe, et al 2023).

Participants' accounts of classrooms lacking ramps, elevators, and adapted workstations echo the observations of Ackorlie et al. (2023), who found that the vast majority of TVET institutions in Ghana were not originally designed with accessibility in mind. The absence of basic modifications, such as ramps for wheelchair users, tactile signage for the visually impaired, and lowered worktables, renders many learning spaces functionally inaccessible, as evidenced by students' reports of being unable to move independently or to participate fully in practical sessions.

These findings reinforce the assertions of Amoako (2022) and Arthur & Mensah (2022), who argue that infrastructural exclusion is compounded by the location of classrooms on upper floors without lift access, inadequate restrooms, and poor lighting. Reports that students must miss practical work or rely on others for mobility and access to facilities not only hinder their academic progress but also diminish their sense of autonomy and belonging, both critical components of inclusive education (UNESCO, 2021).

International literature further supports the urgent need for investment in accessible infrastructure. The World Bank (2022) emphasizes that "physical accessibility is foundational to the realization of inclusive education policies" and that the lack of accessible toilets, signage, and safe emergency exits constitutes a violation of students' rights under the UN Convention on the Rights of Persons with Disabilities (CRPD). In Ghana, despite policy commitments, implementation has mainly lagged due to funding limitations and weak policy enforcement (UNICEF Ghana, 2024).

The accounts from instructors and administrators, who admitted to making improvised arrangements in the absence of institutional resources, are consistent with findings by Dzakpasu et al. (2023) that institutional leaders often feel unsupported and ill-equipped to address physical accessibility needs.

Moreover, concerns about emergency evacuation and student safety highlight a critical gap in risk planning and compliance with international standards (UNESCO, 2021).

Collectively, these findings and the supporting literature underscore that infrastructural barriers are not merely technical or logistical issues but are deeply tied to the rights, dignity, and educational outcomes of learners with disabilities. The persistence of these barriers in Ghanaian fashion TVET programs calls for urgent, systemic investment, the adoption of universal design principles, and rigorous enforcement of accessibility standards. Without such measures, the aspirations of Ghana's Inclusive Education Policy and SDG 4 will remain unattainable for a significant segment of the population.

5.2 Pedagogical and Curriculum-Related Challenges

The findings of this study reveal that pedagogical and curriculum-related barriers are pervasive in Ghanaian fashion TVET programs, significantly impeding the participation and achievement of learners with disabilities. Most notably, participants described teaching methods and instructional materials as largely unadapted to diverse learning needs, a situation echoed throughout recent literature on inclusive education in sub-Saharan Africa (Amoako, 2022; Ackorlie et al., 2023).

The reliance on verbal explanations and blackboard demonstrations, without providing alternative formats such as sign language interpretation, tactile resources, or audio descriptions, disproportionately disadvantages students with sensory impairments. As indicated by one deaf student, the absence of interpreters and accessible notes severely limits their engagement, a challenge also highlighted by Florian & Spratt (2020), who emphasize that "inclusive pedagogy requires multiple means of representation and communication to ensure equitable access for all learners."

The lack of accessible learning materials, such as Braille textbooks or large-print handouts, and the absence of differentiated instructional strategies were recurring themes. This is consistent with the findings of Dzakpasu et al. (2023), who report that most Ghanaian TVET instructors have limited exposure to Universal Design for Learning (UDL) or inclusive pedagogy, resulting in a "one-size-fits-all" approach. Students' reliance on peers for support, such as note-taking and clarifying instructions, is a coping mechanism that, while valuable, underscores institutional gaps rather than addressing them systemically (Ackorlie et al., 2023).

Assessment practices also emerged as a significant barrier. Students with disabilities reported needing extra time for practical exams or hands-on activities, but noted that their requests were often misunderstood or denied. This finding aligns with the work of Florian & Black-Hawkins (2011), who advocate for flexible assessment strategies as a core principle of inclusive education. Without such accommodations, learners with disabilities are placed at a further disadvantage, intensifying anxiety and potentially discouraging persistence in their studies.

The study also highlights a lack of teacher preparedness. Instructors' admissions of having no training or special techniques to support diverse learners reflect broader patterns documented by Amoako (2022) and UNICEF Ghana (2024), who cite insufficient professional development and limited institutional investment in inclusive teaching as systemic issues. As one instructor noted, the desire to assist is present, but without targeted training and resources, meaningful adaptation is unlikely.

Collectively, these findings and the supporting literature underscore the urgent need for investments in teacher training, inclusive curriculum development, and the provision of accessible learning materials in Ghanaian fashion TVET programs. Adopting Universal Design for Learning principles and strengthening institutional support for differentiated instruction and assessment would not only address these gaps but

also advance Ghana's commitment to inclusive education as articulated in policy and international frameworks (UNESCO, 2021; World Bank, 2022).

5.3 Attitudinal Barriers and Social Exclusion

The findings of this study reveal that negative attitudes and low expectations towards learners with disabilities remain deeply entrenched within Ghanaian fashion TVET institutions, significantly shaping the educational experiences and opportunities of these students. This is consistent with a growing body of literature emphasizing that attitudinal barriers, in both overt and subtle forms, are among the most persistent obstacles to inclusive education (Amoako, 2022; Ackorlie et al., 2023; Dzakpasu et al., 2023).

Students in this study frequently reported being underestimated or overlooked by teachers and peers, which often resulted in reduced participation in both classroom and practical activities. The practice of assigning more manageable tasks or excluding students from challenging assignments, as described by participants, mirrors findings from Oppong & Agyei (2021), who noted that "teachers' beliefs about the limited abilities of students with disabilities frequently translate into lowered expectations and restricted learning opportunities." Such attitudes not only impede the acquisition of relevant skills but also diminish self-esteem and motivation, as echoed by students who felt their efforts were undervalued.

The reluctance of some instructors to assign the same work to students with disabilities, out of concern that they may fail, reflects a deficit-oriented mindset rooted in the medical model of disability (Shakespeare et al., 2021). This approach, while often well-intentioned, ultimately perpetuates exclusion and limits students' growth by failing to recognize their potential and the value of appropriate support and reasonable accommodations. As Florian & Spratt (2020) argue, truly inclusive pedagogy requires shifting the focus from what students cannot do to what they can achieve with appropriate supports.

Social exclusion was not confined to instructional settings but extended into the broader school environment, including group work, social activities, and informal interactions. Students' feelings of isolation and exclusion during group assignments and social gatherings are well documented in the literature (Arthur & Mensah, 2022; Ackorlie et al., 2023). Such exclusion can have profound effects on students' sense of belonging and overall well-being, further hindering their academic and vocational progress (UNICEF Ghana, 2024).

Despite these challenges, the study also revealed examples of positive change. Some instructors expressed a genuine willingness to support inclusion if provided with appropriate training and resources, while a few students reported supportive peers who actively facilitated their participation. These findings echo the calls by Florian & Black-Hawkins (2011) and Amoako (2022) for targeted awareness-raising and sensitivity training as critical strategies for shifting attitudes and fostering a culture of inclusion. Intentional efforts to build supportive peer networks and provide professional development for staff are essential for transforming the learning environment and promoting equity (UNESCO, 2021).

In sum, these findings underscore the powerful influence of attitudes and social dynamics on the educational experiences of learners with disabilities in fashion TVET. Addressing attitudinal barriers through ongoing training, awareness campaigns, and institutional leadership is essential for creating a more inclusive and affirming environment that enables all students to thrive.

5.4 Institutional Preparedness and Support

The findings of this study clearly indicate that institutional preparedness and support for inclusive education in Ghanaian fashion TVET programs remain insufficient, despite firm national-level policy commitments. Many institutional leaders and staff acknowledged the presence of inclusive education policies. However, they lamented the lack of dedicated funding, practical training, and sustained policy

enforcement needed to translate these policies into actionable practices. This gap between policy and implementation has been widely documented in the literature (Dzakpasu et al., 2023; Amoako, 2022; UNICEF Ghana, 2024).

The reported absence of funding for infrastructural adaptations—such as ramps, accessible restrooms, or specialized equipment mirrors findings by Ackorlie et al. (2023), who state that "resource constraints are the single greatest barrier to practical inclusion in Ghana's TVET sector." Leaders' concerns about untrained staff and inadequate facilities highlight the disconnect between policy aspirations and institutional realities, a theme also emphasized by Anamuah-Mensah et al. (2021) in their analysis of TVET reform in Ghana. As one vice-principal in the present study suggested, the combination of high policy expectations and limited human and material resources can leave staff feeling "set up to fail," a sentiment echoed in similar research across African contexts (Arthur & Mensah, 2022).

Another critical issue is the lack of ongoing guidance, monitoring, and accountability from higher authorities. The frustration expressed by institutional leaders regarding the absence of follow-up and technical support after policy announcements aligns with Dzakpasu et al. (2023), who argue that "policy implementation remains fragmented and unsystematic, with little oversight." This lack of sustained engagement undermines efforts to institutionalize inclusion and leaves schools to "figure things out" on their own.

Disability advocates in this study confirmed the persistent gap between national commitments and the reality in most TVET centers, a gap also highlighted in UNICEF Ghana's (2024) progress reports. While Ghana's policy framework is robust on paper, practical implementation is often ad hoc and dependent on the initiative of individual institutions or temporary donor projects, which rarely result in long-term systemic change (World Bank, 2022).

The need for professional development and accessible teaching resources was repeatedly emphasized by instructors, reflecting Amoako's (2022) observation that teachers' willingness alone is insufficient without adequate training and materials. The limited scale and sustainability of externally funded pilot projects, as described by participants, further underscores the necessity for government-led, long-term investment and coordination (Ackorlie et al., 2023).

Overall, these findings and the supporting literature demonstrate that, although awareness of inclusive education principles is generally high among institutional leaders and staff, genuine progress is hindered by systemic barriers. Addressing these challenges requires coordinated action across government, educational authorities, and development partners, with a focus on sustained funding, regular monitoring, accountability mechanisms, and comprehensive capacity building. Only through such measures can Ghana's vision for inclusive fashion TVET become a practical reality for learners with disabilities.

5.5 Opportunities and Enablers

Despite the many obstacles to inclusion in Ghanaian fashion TVET, the study identified important opportunities and enabling factors that align with and extend the literature on inclusive education and vocational training. The introduction of adaptive technologies, such as tactile sewing guides, audiobooks, and large-print instructional materials, has emerged as a particularly promising intervention. These tools, though currently limited in scope, had an immediate positive impact on students' ability to participate in practical activities and enhanced their sense of autonomy and competence. This finding echoes that of Ackorlie et al. (2023) and UNESCO (2021), who emphasize that access to adaptive and assistive technologies is critical to dismantling physical and instructional barriers in technical and vocational settings. The enthusiasm expressed by students for such tools demonstrates the transformative potential

of even small-scale innovations, aligning with the social model of disability's focus on environmental adaptation rather than individual deficit (Shakespeare et al., 2021).

In addition to technological innovations, the study highlights the effectiveness of professional development for instructors. Inclusive pedagogy workshops have been reported to increase teachers' confidence, diversify instructional methods, and improve student engagement. This is consistent with the work of Florian & Spratt (2020) and Amoako (2022), who argue that sustained professional learning is essential for equipping educators with the skills and dispositions required for inclusive practice. The findings reinforce the importance of moving beyond policy rhetoric to practical, ongoing training that empowers teachers to respond flexibly to student diversity.

Peer support networks among students with disabilities also proved to be a vital enabler of inclusion. These informal, student-led groups provided both academic and psychosocial support, helping to bridge gaps left by institutional deficiencies. Literature on inclusive education underscores the importance of peer collaboration, not only for learning support but also for fostering a sense of community and belonging (UNICEF Ghana, 2024; Florian & Black-Hawkins, 2011). The solidarity evident in these student networks demonstrates how social capital can mitigate exclusion and promote resilience among learners with disabilities.

These findings suggest that, while systemic barriers persist, there are actionable entry points for making fashion TVET more inclusive in Ghana. The successful pilot of adaptive technologies, the positive outcomes of targeted teacher training, and the organic development of peer support networks all point to scalable strategies that can be formalized and expanded. The literature affirms that such initiatives, when embedded in a broader framework of institutional commitment and resource allocation, can significantly advance inclusive education for learners with disabilities (World Bank, 2022; UNESCO, 2021).

1. Conclusion

This study set out to explore the challenges and opportunities associated with implementing inclusive fashion education for persons with disabilities in Ghanaian TVET institutions. Drawing on the lived experiences of students, instructors, administrators, and advocates across three diverse regions, the findings reveal that while Ghana has made important policy commitments toward inclusive education, significant barriers persist at the infrastructural, pedagogical, attitudinal, and institutional levels.

Physical inaccessibility, including the lack of ramps, elevators, adapted workstations, and accessible restrooms, remains a fundamental obstacle, preventing many learners with disabilities from full participation in fashion TVET programs. Pedagogical and curriculum-related challenges, such as the absence of adapted teaching methods, learning materials, and flexible assessments, further compound exclusion for students with sensory and mobility impairments. Attitudinal barriers, including low expectations and social exclusion by teachers and peers, undermine learners' motivation, sense of belonging, and opportunities for skill development.

Institutional preparedness is hampered by inadequate funding, limited professional development, and weak policy enforcement, leaving many TVET centers ill-equipped to operationalize the principles of inclusive education. Nonetheless, the study also identifies key opportunities and enablers: piloting adaptive technologies, the positive impact of inclusive pedagogy workshops, and the formation of peer support networks, all of which demonstrate that change is possible even within resource-constrained settings.

The study's findings underscore the urgent need for systemic investment in accessible infrastructure, ongoing capacity building for educators, the development and dissemination of adaptable teaching

resources, and stronger monitoring and accountability mechanisms. Policy makers, institutional leaders, and development partners must work collaboratively to bridge the gap between policy and practice, ensuring that inclusive education is not only a legal and moral commitment but also a lived reality for all learners.

Ultimately, advancing inclusive fashion TVET in Ghana holds transformative potential—not only for persons with disabilities but for the broader creative economy and society. By dismantling barriers and embracing diversity, Ghana can harness the talents and aspirations of all its citizens, moving closer to the realization of SDG 4 and the vision of equitable, quality education for all.

Recommendations

Government and educational authorities should prioritize the provision of ramps, elevators, adapted workstations, and accessible restrooms in all fashion TVET centers. Institutions should conduct accessibility audits and develop phased plans to retrofit existing facilities in alignment with universal design principles.

Regular, targeted training on inclusive pedagogy and Universal Design for Learning (UDL) should be made available to instructors, administrators, and support staff. Training should cover differentiated instruction, accessible assessment, the use of assistive technologies, and fostering positive attitudes towards disability.

Curriculum developers and institutions must ensure the availability of learning materials in accessible formats, including Braille, large-print materials, audio recordings, and tactile resources, to support learners with diverse needs.

TVET centers should invest in adaptive tools, such as tactile sewing guides, audiobooks, and accessible design software. Partnerships with NGOs, tech companies, and donors can help scale up the provision and maintenance of such technologies.

The Ministry of Education and relevant agencies should establish robust mechanisms to monitor the implementation of inclusive education policies at the institutional level. Regular reporting, supervision, and community feedback loops will help ensure compliance and continuous improvement.

Schools should organize awareness campaigns, disability sensitization workshops, and inclusive extracurricular activities to reduce stigma and promote positive attitudes among staff and students. The establishment and formal recognition of peer support groups can help learners with disabilities navigate academic and social challenges.

Institutions should work closely with disability advocacy organizations, students, parents, industry partners, and local communities to co-design solutions, identify resource needs, and share best practices for inclusion.

Promising initiatives, such as adaptive technology pilots and inclusive pedagogy workshops, should be evaluated, institutionalized, and scaled up rather than remaining isolated or temporary interventions.

Ongoing research on the experiences and outcomes of learners with disabilities in fashion TVET should be supported to inform policy and practice. TVET institutions should collect and analyze disaggregated data on enrollment, retention, and achievement of students with disabilities.

Suggestions for Further Studies

Future research could examine the long-term outcomes of inclusive fashion TVET graduates with disabilities, with a focus on employment, entrepreneurship, and social integration.

Conduct comparative analyses of inclusive practices and outcomes in fashion TVET institutions across regions of Ghana or between Ghana and other sub-Saharan African countries.

Explore the effectiveness and scalability of specific adaptive and assistive technologies (e.g., tactile sewing guides, screen readers, sign language apps) in enhancing learning and participation for students with different disabilities.

Investigate the impact of various models of professional development and ongoing support for TVET instructors on the implementation of inclusive pedagogy and Universal Design for Learning.

Examine the barriers and facilitators to effective policy implementation at the institutional and governmental levels, with a focus on funding, monitoring, and stakeholder engagement.

References

1. Ackorlie, N., Osei, M., & Yeboah, S. (2023). Barriers to participation in technical vocational education and training among persons with disabilities in Ghana. *International Journal of Inclusive Education, 27*(8), 945–960. https://doi.org/10.1080/13603116.2022.2144715
2. Ainscow, M. (2020). Promoting inclusion and equity in education: Lessons from international experiences. *Nordic Journal of Studies in Educational Policy, 6*(1), 7–16. https://doi.org/10.1080/20020317.2020.1729587
3. Amoako, E. (2022). The implementation of inclusive education in Ghana: Progress and challenges. *African Journal of Disability, 11*, Article a983. https://doi.org/10.4102/ajod.v11i0.983
4. Anamuah-Mensah, J., Oppong, C., & Agyeman, D. (2021). TVET for sustainable development in Ghana: Policy and practice. *Journal of Technical Education and Training, 13*(3), 1–13. https://doi.org/10.30880/jtet.2021.13.03.001
5. Arthur, S., & Mensah, J. (2022). The impact of the fashion industry on youth empowerment in Ghana. *Journal of African Business, 23*(2), 317–334. https://doi.org/10.1080/15228916.2021.1967929
6. Boateng, M. (2020). Technical and vocational education and training in Ghana: The role of fashion design. *International Journal of Vocational Education and Training, 28*(2), 45–60.
7. Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.
8. Dzakpasu, P., Aikins, M., & Boakye, F. (2023). Inclusive education policy implementation: A case study of technical education in Ghana. *Disability & Society, 38*(5), 755–771. https://doi.org/10.1080/09687599.2022.2139405
9. Florian, L., & Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *British Educational Research Journal, 37*(5), 813–828. https://doi.org/10.1080/01411926.2010.501096
10. Florian, L., & Spratt, J. (2020). Enacting inclusion: A framework for interrogating inclusive practice. *European Journal of Special Needs Education, 35*(3), 272–285. https://doi.org/10.1080/08856257.2020.1769985
11. Meyer, A., Rose, D. H., & Gordon, D. (2021). *Universal learning design: Theory and practice* (2nd ed.). CAST Professional Publishing.
12. Ministry of Education, Ghana. (2021). *Inclusive Education Policy Review Report* Accra, Ghana: Ministry of Education.
13. Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods, 16*(1), 1–13. https://doi.org/10.1177/1609406917733847

14. Oppong, F. B., & Agyei, D. D. (2021). Barriers to inclusive education in Ghana: Views from teachers in selected public schools. *African Journal of Disability, 10*, Article a803. https://doi.org/10.4102/ajod.v10i0.803
15. Shah, S. (2018). *Disability and the creative industries*. Palgrave Macmillan. https://doi.org/10.1057/978-1-137-47991-4
16. Shakespeare, T., Ndagire, F., & Seketi, Q. E. (2021). Triple jeopardy: Disabled people and the COVID-19 pandemic in Africa. *Disability & Society, 36*(8), 1316–1321. https://doi.org/10.1080/09687599.2021.1919503
17. UNESCO. (2021). *Reaching out to all learners: A resource pack for supporting inclusion and equity in education*. Paris, France: UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000374249
18. UNICEF. (2021). *The state of the world's children 2021: On my mind – Promoting, protecting and caring for children's mental health*. New York, NY: UNICEF. https://www.unicef.org/reports/state-worlds-children-2021
19. UNICEF Ghana. (2024). *Inclusive education programme in Ghana: Progress report*. Accra, Ghana: UNICEF Ghana.
20. United Nations. (2023). *The Sustainable Development Goals Report 2023*. United Nations. https://unstats.un.org/sdgs/report/2023/
21. World Bank. (2022). *Building skills for economic transformation and jobs in Ghana*. World Bank. https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099935002142232412/idu0db4e9d2b0f7d204b6d0b0e1081e7a0d0d8f7