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Message by the Office of the V/President for Research and Community Engagement

Kotebe University of Education (KUE) is pleased to present this *Special Issue Journal on Policy Briefs*, a collection dedicated exclusively to policy-oriented research outputs. This publication is a testament to our institutional commitment to bridging the gap between academic research and evidence-informed decision-making in the education sector and beyond.

This special issue features eleven policy briefs produced from diverse, yet interrelated initiatives coordinated under the Office of the Vice President for Research and Community Engagement. One of the briefs emerged from the international conference on *"AI in Education: Challenges and Opportunities for the Global South"*, organized by the Research and Publication Directorate. Another brief was developed from the symposium on *"Strengthening Partnership for Quality Education in Ethiopia"*, which was led by the University-Industry Linkage and Technology Transfer Directorate.

A significant portion of this issue (six policy briefs) has been produced under the EU-funded FAITH Project, in which KUE is proud to serve as the lead institution. These briefs reflect the project's strategic aim to build a framework for the University of Applied Science (UAS) sector and develop an Ethiopian UAS model.

The remaining three policy briefs are the result of competitive research grants awarded through KUE's Grand Research Fund Call, which supports rigorous, relevant, and impactful studies conducted by our own academic staff.

The primary objective of this publication is to communicate research-informed policy options to key stakeholders, including government agencies, development partners, and educational institutions. By sharing these concise and action-oriented documents, we aim to influence policy dialogue and promote effective practices that improve the quality, equity, and relevance of education in Ethiopia.

We extend our sincere appreciation to all the researchers and professionals who authored the policy briefs included in this volume. Your contributions are instrumental in transforming academic knowledge into practical solutions.

This journal will be widely distributed to concerned bodies and decision-makers, with the hope that these policy briefs serve as catalysts for thoughtful policy formulation and meaningful educational reform.

Kidist Yohannes (PhD)

V/President, for Research and Community Engagement, KUE

Editor-in-Chief's Note

This special issue of Kotebe Journal of Education is dedicated entirely to education policy briefs that connect research with actionable solutions. It contains 11 high-quality policy briefs addressing a wide range of contemporary educational issues critical to Ethiopia and the global education landscape.

The aim of this special issue is to provide a platform for scholars and practitioners to translate research findings into concise, policy-relevant messages that inform decision-making, reform, and innovation in the education sector. From inclusive education and digital learning to teacher development and institutional reform, these briefs offer timely, evidence-based insights to advance education systems.

I am deeply grateful for the contributions of our editorial board members, authors, and the dedicated work of our reviewers in shaping these impactful pieces. Each manuscript underwent a rigorous peer-review process to ensure thematic relevance, clarity, and practical value. The combined expertise of our editors and reviewers was essential in the process of creating impactful policy briefs. They have been working together to refine content, detect biases, and ensure clarity of arguments, ultimately shaping the briefs' effectiveness in influencing policy decisions.

I believe this special issue will be a valuable resource for policymakers, educators, development partners, and researchers alike. I invite ongoing contributions and collaboration to enhance the journal's role in shaping meaningful educational discourse and reform.

Thank you once again to the entire scientific community and our readers for your continued support and engagement.

The Editor-in-Chief
Kotebe Journal of Education (KJE)

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Integrating Artificial Intelligence in Ethiopian Education System: the Need for Policy Intervention

Kotebe University of Education

Executive Summary

Kotebe University of Education hosted its third international research conference on the theme *"Artificial Intelligence (AI) in Education: Opportunities and Challenges for the Global South"* in Addis Ababa, Ethiopia, on March 27–28, 2025. The event brought together experts to share international experiences, examine AI's potential benefits and challenges for Ethiopian education, and develop policy recommendations for its effective integration. The conference output indicated that AI offers transformative opportunities to strengthen education systems in developing countries. It enhances teaching and learning through personalized and adaptive platforms, promotes equitable access by overcoming socio-economic and geographic barriers, and streamlines administrative processes for greater efficiency. It supports research and innovation by enabling advanced data analysis, efficient literature reviews, and predictive modeling. Besides, it facilitates smart content creation, automated grading, and virtual tutoring, improving both educator capacity and student outcomes. AI also enhances Education Management Information Systems (EMIS), ensuring data-driven decision-making and policy development. Despite its vast potential, the integration of AI in education faces significant challenges, particularly in the Global South. Key obstacles include the digital divide, infrastructure gaps, and limited access to digital tools and connectivity. Financial constraints further hinder investment in AI technologies and capacity building. Besides, there is a widespread lack of awareness and digital literacy among educators and learners, limiting effective AI adoption. Concerns around data privacy, security, ethical implications, and regulatory gaps pose risks to safe AI usage. Other challenges include misinformation, factual inaccuracies, and AI's inability to fully address linguistic and cultural contexts. Moreover, an over-reliance on AI may undermine critical thinking, creativity, and emotional intelligence, potentially dehumanizing the educational experience. To harness the benefits of AI in education while addressing its challenges, the conference proposed several key policy recommendations. These include developing national and institutional ethical frameworks for AI, investing in digital infrastructure and expanding access, and ensuring robust cyber security and data protection measures. Strengthening teacher training and AI literacy programs is crucial, alongside implementing AI detection tools to promote ethical and responsible use. In addition, bridging ethical concerns and regulatory gaps, and fostering collaboration with global AI education partners, are essential.

1. Introduction

Education plays an indispensable role in the overall improvement of society and the lives of individuals within a nation (Blossfeld & von Maurice, 2019). It is a vital instrument for achieving sustainable development. Despite significant efforts in education sector reforms, learning outcomes, the global south faced significant challenges, particularly in rural and underprivileged communities. As the digital revolution reshapes global education systems,

developing countries including Ethiopia have an opportunity to harness Artificial Intelligence (AI) to reform its education sector.

The application of AI in education is facilitated by the advancement of technologies (Dritsas & Trigka, 2025). AI has the potential to enhance teaching quality, provide personalized learning experiences, simplify administrative processes, and improve access to educational resources (Singh et al, 2025; Amin et al., 2025; Nikolopoulou, 2025). However, the successful integration of AI in Ethiopia's education system requires a strategic approach that considers local infrastructure, teacher training, ethical concerns, and financial sustainability (Tarisayi & Manhibi, 2025; Guan, 2025). This policy brief presents AI as a transformative solution, discusses the barriers to implementation, and proposes actionable policy recommendations.

2. Policy Problems

This policy brief is developed in alignment with the objectives of the international research conference, which examined the role of Artificial Intelligence (AI) in education, particularly in the Global South. A major barrier to effective AI integration in Ethiopia's education system is the absence of comprehensive governance frameworks and clear policies. This gap exacerbates the sector to ethical risks, data privacy issues, and uncoordinated AI use, while worsening challenges like limited infrastructure, low digital literacy, and educational inequalities. The purpose of this brief is, therefore, to provide policymakers, educators, and stakeholders with strategic insights and recommendations on how to establish robust governance structures and effectively harness AI technologies to promote equitable, inclusive, and quality education in Ethiopia.

3. Opportunities of AI in Education for the Global South

AI experts highlight key opportunities that AI presents for enhancing Ethiopia's education system, aligning with findings from various scholarly sources. These opportunities include:

Table 1: AI opportunities with associated descriptions

Opportunities	Descriptions	Supported by
Enhancing Teaching and Learning Processes	AI has the potential to revolutionize teaching and learning by automating assessments, providing virtual assistance, and creating smart educational content. These AI-driven advancements ensure a more engaging, inclusive, and effective learning experience for students across Ethiopia.	Bilal et al, 2025
Equitable Accessibility	Ensuring equitable accessibility to AI tools in education is crucial, particularly for marginalized groups, low-income, and rural	Isoqovich & Kisilkova,

	communities. Policies should focus on expanding digital infrastructure, affordable internet access, and providing necessary devices to bridge the digital divide.	2025
Strengthening Research and Innovation Capabilities	AI can significantly enhance research and innovation within Ethiopia's education system by improving data analysis, ensuring academic integrity, and supporting linguistic advancements. Integrating AI into research and educational institutions can boost global academic competitiveness and drive innovation tailored to Ethiopia's unique educational and cultural landscape.	Gama & Magistretti, 2025
Improving Administrative Efficiency and Educational Governance	AI can enhance efficiency by optimizing resource allocation and supporting data-driven decision-making, leading to a more responsive and efficient education governance system. Besides, AI-driven automation can streamline administrative processes such as admissions, financial aid distribution, and teacher performance evaluations, reducing bureaucratic inefficiencies.	Ahmed, 2025
Enhancing Personalized Learning	AI-driven personalized learning offers an opportunity to cater to individual student needs, improving engagement and academic outcomes. It enables tailored content delivery, allowing students to progress at their own pace.	Madhumithaa et al, 2025
Providing Learning Assistance Through Virtual Tutors	AI-powered virtual tutors can offer valuable learning support, especially in areas with limited access to qualified teachers. These virtual tutors help bridge the gap in educational resources, ensuring continuous learning even in remote or underserved regions.	Jothikumar et al, 2025
Supporting the Creation of Smart Content and Automated Grading	AI can assist in creating smart content and automating grading, improving educational efficiency and providing instant feedback to students. This reduces teachers' workload and enhances learning experiences, particularly in resource-limited areas.	Kooli & Yusuf, 2025
Assisting in Data Analysis, Pattern Recognition, and Predictive Modeling	AI can support research by analyzing large datasets, recognizing patterns, and creating predictive models. This capability enhances academic research, improves decision-making in education policy, and helps identify trends for better resource allocation.	López-Meneses et al, 2025
Facilitating Efficient Literature Reviews	AI can streamline literature reviews by quickly scanning vast amounts of academic articles and research papers, identifying key themes, trends, and relevant studies. This accelerates research processes and ensures comprehensive reviews.	Mrida et al., 2025
Enhancing Education Management Information Systems	AI-powered Education Management Information Systems can track student performance, attendance, and resource utilization in real-time, providing school administrators with actionable insights to improve institutional effectiveness.	Suwanreung & Siththada, 2025

4. Challenges of AI in Education

According to the AI experts, the challenges associated with integrating AI into Ethiopia's education system, as substantiated by various scholarly sources, include the following:

Table 2: AI challenges with associated descriptions

Challenges	Descriptions	Supported by
Digital Divide, Infrastructure Gaps, and Limited Digital Access	Ethiopia's education system faces significant disparities in digital access, particularly between urban and rural areas. Low internet penetration rates, frequent network disruptions, and lack of digital devices in rural schools hinder digital learning, perpetuating educational inequalities.	Jha & Singh, 2025
Financial Constraints	AI adoption requires substantial financial investment in infrastructure, digital tools, and capacity building. Ethiopia's education sector, already constrained by limited budgets, struggles to allocate sufficient resources for AI integration.	Mohib, 2025
Lack of Awareness and Literacy Among AI Users	Teachers and educators in Ethiopia have limited exposure to digital tools and AI-driven teaching methods. Current teacher training programs do not incorporate AI literacy or digital pedagogy, hindering effective integration of AI in classrooms.	Amaewhule, 2025
Data Privacy, Security, Ethical Concerns, and Regulatory Gaps	AI's reliance on large-scale student data collection raises concerns about privacy and security, especially in Ethiopia where data protection laws and digital governance frameworks are underdeveloped. This increases the risk of data misuse or breaches.	Nadella et al., 2025
Misinformation and Factual Inaccuracy	AI-generated content may sometimes result in misinformation or factual inaccuracies, posing risks to the credibility and accuracy of educational materials.	Talaver & Vakaliuk, 2025
Linguistic and Cultural Barriers	Ethiopia's linguistic diversity, with over 80 languages, creates challenges for AI platforms predominantly designed in English or other global languages. This limits accessibility and inclusivity for students who speak Amharic, Afaan Oromo, Tigrinya, and other local languages.	Shahmerdanova, 2025
Over-Reliance	Excessive dependence on AI tools may discourage critical thinking, creativity, and emotional intelligence among students. It risks dehumanizing the education process by reducing opportunities for interpersonal interaction, problem-solving, and holistic development. A balance between AI and human-centered pedagogy is crucial.	Naseer, 2025

5. Policy Recommendations

Recognizing the potential benefits and associated challenges, the conference outcomes can serve as valuable inputs for policy formulation, emphasizing the following key recommendations:

Table 3: Policy recommendations with key actions, pros and cons

Policy Options	Key Actions	Pros	Cons
Develop national and institutional AI strategy and ethical framework	Develop guidelines addressing data privacy, algorithmic bias, etc.	Ensures responsible AI use, protects students' rights	Requires expertise and coordination; may face enforcement challenges
Invest in digital infrastructure and	Expand internet access, provide devices,	Reduces digital divide; improves rural access	High upfront costs; maintenance & sustainability issues

accessibility	develop digital hubs		
Ensure robust cyber security and data protection	Implement strong data protection policies & technical safeguards	Safeguards sensitive student/teacher data; builds trust	Cyber security threats constantly evolve; resource-intensive
Strengthen teacher training and AI literacy programs	Integrate AI literacy into teacher training curricula	Empowers educators to effectively utilize AI tools	Requires curriculum renovation; risk of resistance
Implement AI detection tools for responsible use	Deploy AI-content detectors, monitor misuse	Prevents unethical use (e.g., plagiarism, misinformation)	Could raise privacy concerns; false positives/negatives possible
Bridge ethical concerns and regulatory gaps	Update legal frameworks, involve stakeholders	Creates clear accountability and safeguards	Legal processes may be slow; potential conflicts between innovation & regulation
Collaborate with global AI education partners	Partner with international institutions, NGOs, tech companies	Access to expertise, funding, and tested solutions	Risk of over-reliance on external partners; may limit local capacity development

6. Conclusion

To successfully integrate AI into the Ethiopian education system, policies must reflect the nation's unique cultural, social, and economic contexts while addressing ethical, digital, and governance challenges. Ethiopia can create an inclusive, transparent, and future-ready education system that equips students, educators, and institutions for the AI-driven world through implementing the recommendations outlined in this brief.

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Strengthening Partnerships to Enhance Ethiopia's Educational Quality

Kotebe University of Education

Executive Summary

The National Symposium on Strengthening Partnerships to Enhance the Quality of Education in Ethiopia, held on February 28, 2025, at Haile Grand Hotel, Addis Ababa facilitated by Kotebe University of Education (KUE), brought together key stakeholders from government, academia, the private sector, and development partners. The event aimed to foster dialogue on the role of partnerships in improving Ethiopia's education system, with a focus on teacher education, curriculum relevance, infrastructure, and multi-stakeholder collaboration. A critical issue raised during the symposium was the persistent problem of low educational quality, which has hindered the effective delivery of education and failed to meet the needs of Ethiopia's rapidly changing socio-economic environment. Participants discussed how outdated curricula, insufficiently trained teachers, and lack of resources and infrastructure contribute to the widening gap between educational outcomes and labor market demands. The need to align education with national development goals, particularly in light of global educational standards and the Sustainable Development Goals (SDGs), was also highlighted as a central challenge. The key issues included expert discussions on aligning teacher professional development with national and global educational standards, the importance of curriculum innovation to meet the demands of the labor market, and the need for enhanced infrastructure and research-driven policy-making. The symposium also underscored the importance of partnerships between universities, Regional Education Bureaus (REBs), the Ministry of Education (MoE), and the private sector to address these critical challenges in Ethiopia's education sector. This policy brief, therefore, outlines the main findings from the symposium and presents a series of actionable policy recommendations aimed at strengthening partnerships, improving teacher quality, aligning curricula with societal needs, and fostering sustainable development within the Ethiopian education system.

1. Introduction

Ethiopia has made strong progress in improving educational access, especially at primary level since 1991 (Rolleston et al., 2024). Higher education has also seen rapid growth, with the number of institutions increasing to 177 (49 governments and 128 non-governments) (Tareke, et al., 2024). This expansion has improved access to post-secondary education for many Ethiopian students (Kedir, 2009). However, despite these advances, the quality of education remains a critical issue. Factors such as a mismatch between the curriculum and market demands, poor learning environments, limited focus on skills development, and a lack of industry-skilled staff continue to hamper educational outcomes (Rolleston et al., 2024).

One way of addressing these problems is by creating an efficient partnership system among the various stakeholders of the education sector, such as industries, local communities, enterprises,

donors, media, schools, colleges and universities, etc. In his study, Oliso (2023), for instance, recommended the Ethiopian government, universities, Ministry of Education, quality assurance agencies, and other stakeholders to work collaboratively to improve the country's higher education. In addition, the urgency of a coordinated effort among governmental and non-governmental actors has been emphasized by a panel of experts in a symposium organized recently by Kotebe University of Education. Hence, the purpose of this brief is to present relevant policy options and suggest actionable insights which will help to create a consistent and effective partnership system, which contributes to the efforts undertaken to mitigate the quality of education problem in Ethiopia.

2. Policy problem

Ethiopia has shown remarkable progress in increasing access to education to its citizens after the launching of the 1994 Education and Training Policy (Ministry of Education, 2019; Hinchliffe, & Tan, 2006). Though access to education showed such significant progress, the quality of education has been severely challenged. Observing this bewildering problem in the education system, the Ethiopian government has recently introduced reforms, namely the 2023 revised Education and Training Policy, the Ethiopian Education Transformation Program (EETP), and other similar initiatives to alleviate the problem. In these reforms and initiatives, partnership among stakeholders, which is one of the indicators of quality education, has been overlooked. As Kendall (2006) indicates, regular and effective collaboration among donors, governments, non-governmental organizations, and communities can strengthen education quality improvement efforts. Several local and international organizations invest plenty of time, mobilize massive resources, and personnel to fix the educational crisis that Ethiopia has faced. These efforts and activities, however, are fragmented, isolated, and hence are largely ineffective. The purpose of this brief, therefore, is to call for a policy frame which provides principles, rules, and procedures which can be of use in defining the goals, purposes, criteria of selection for potential partners, setting out support system, and governing the entire partnership processes. We believe that such a policy framework yields effective, efficient, and sustainable collaboration among key government and non-government stakeholders in the education system. Indeed, this will contribute enormously to the ongoing efforts to ensure quality of education in Ethiopia.

3. Opportunities of partnership for quality education

Table 1 indicates the opportunities that can support collaboration for systemic improvements in teacher training, institutional efficiency, and the overall educational quality and relevance.

Table 1: Opportunities of stakeholder collaboration for quality and relevance of education

Opportunity	Description
Government interest in reform	The Ministry of Education, regional education bureaus and regulatory bodies are showing commitment to reforms, creating policy options for structured partnerships and quality enhancement.
Institutional momentum and commitment	Growing recognition by policymakers, universities, and experts about the need for educational quality improvement provides a strong foundation for action.
Adoption of global and regional best practices	International models can be contextualized to improve teacher education, accreditation, and curriculum relevance in Ethiopia.
Stakeholder willingness to collaborate	Symposium insights show increased interest among institutions to co-develop solutions, which enhance partnership potential.
Shared resource utilization potential	Institutional collaboration allows for cost-effective sharing of staff, infrastructure, and learning materials, reducing duplication and inefficiency.
Policy alignment with SDGs and national agenda	The push for SDG 4 and Ethiopia's national education roadmap incentivizes reforms focused on inclusion, equity, and quality.
Regional teacher education centers	The presence of regional teacher training colleges provides decentralized platforms for capacity building and localized partnerships.
Technological and digital transformation opportunities	Investment in digital infrastructure, teacher digital skills, and e-learning tools can improve teacher training and address access gaps.
Growing donor interest and investment	International partners and donors are increasingly interested in supporting teacher education reforms, providing technical and financial support.
Increased demand based training and internship programs	Enhanced internships and practical training programs, will create conducive environment for collaboration and partnership

4. Challenges for Quality of Education and Partnership

Quality of education and partnership in Ethiopia's education sector faces challenges like limited resources, frequent leadership turnover, and cultural barriers. These issues hinder effective partnerships and slow progress in educational reforms as indicated in Table 2.

Table 2: Challenges in strengthening partnership, and quality of education

Challenge	Description
Lack of institutional coordination	There is a challenge in aligning efforts between various institutions, such as universities, the Ministry of Education (MoE), and regional educational bureaus.
Human resource (HR) turnover and instability	High turnover of resources at educational institutions and within key policy-making bodies hinders long-term commitment and effective implementation of inclusive education strategies, leading to a lack of continuity in reforms.

Resource constraints and unequal distribution	Insufficient resources and unequal distribution across regions create challenges in implementing educational reforms. Some areas, especially rural areas, lack access to basic educational infrastructure and technology.
Limited capacity of stakeholders	While partnerships involve multiple sectors, some stakeholders, such as private institutions or development organizations, may lack the capacity to contribute meaningfully or collaborate effectively due to insufficient skills, resources, or expertise.
Cultural and social barriers to inclusivity	Cultural attitudes towards disability and education in certain communities can present significant barriers to inclusive education.
Resistance to change in educational practices	Resistance to adopting new pedagogical methods or technologies, particularly among teachers and educators, creates obstacles to transforming education systems. This resistance may stem from a lack of awareness, training, or belief in the efficacy of new approaches.
Teacher status and respect in society	Teachers in Ethiopia often face challenges in gaining respect and recognition from the society. This affects their morale, job satisfaction, and willingness to stay in the profession, ultimately impacting the quality of education.

5. Policy Recommendations

Acknowledging the potential advantages and challenges of partnership, quality and inclusive education, the symposium results in valuable insights for policy development, highlighting key policy recommendations outlined in Table 3.

Table 3: Policy recommendations to improve partnership, education quality and relevance

Policy Options	Key Actions	Pros	Cons	Stakeholders
Institutionalize partnerships between teachers training institutions, governing bodies, and developmental agents	Establish formal collaboration frameworks, collaborative research and innovation, share resources and infrastructure	Improve teacher quality and preparedness, resource sharing and cost efficiency, innovation in pedagogy, enhance professional development.	Administrative and logistical hurdles, sustainability issues, resistance to change, quality control challenges, cultural and language barriers	MoE, Education Bureaus, KUE, Regional Teacher Training Colleges
A comprehensive quality and inclusive framework for education reform	Define clear standards and benchmarks, strengthen teacher training and professional development, enhance curriculum relevance and flexibility, foster equity and inclusion, leverage technology, ensure sustainable funding and governance and adapt to global best practices	Ensure consistent standards and equity, improve teacher quality and accountability, promote systemic coherence, enhances global competitiveness, improve stakeholder participation	Complex to implement, rigidity and reduced local flexibility, demand high costs and resource, resistance to change, equity gaps in enforcement	MoE, Education Bureaus
Accredit and supervise the teacher training practices	Establish clear accreditation standards, implement rigorous program review processes, enforce accountability through data, promote transparency and public reporting, conduct tracer study, support continuous improvement, invest in inspectorate capacity, and integrate stakeholder feedback	Ensure quality and standardization, enhance accountability, boosts credibility and employability, promote evidence-based practices	Resource-intensive and bureaucratic, rigidity and innovation barriers, equity gaps, subjectivity in evaluations	MoE, ETA, KUE, Regional teacher education Colleges
Develop a multi-faceted, and multi-stakeholder approach to make teaching a more attractive and rewarding profession	Competitive compensation and benefits, career development pathways, improve working conditions, enhance respect and recognition, strategic recruitment and training initiatives, national dialogue initiatives, stakeholder engagement and support system and wellbeing	Higher retention, better student outcomes, enhance prestige, equity improvements and professional growth	Significant costs, complex implementation, political resistance, sustainability challenges	MoE, MoF, Civil Service Commission
Strengthen strategic investment in infrastructure and digital transformation	Generate income, enhance physical infrastructure, expand reliable internet access, equip schools with digital tools, train teachers in digital pedagogy, develop digital learning content, ensure data privacy, prioritize equity in access	Better learning outcomes, closes equity gaps, future-ready skills, saves long-term costs and data driven decisions	High initial costs, digital divide risks, teacher resistance, cyber security threats, maintenance challenges	MoE, Education Bureaus, KUE, Teacher training Colleges

6. Conclusion

The symposium served as a crucial platform for addressing the pressing issues in Ethiopia's education sector, particularly around teacher quality, inclusive education, partnership, and the integration of technology. The discussions highlighted both opportunities and challenges of partnership for quality education, offering a clear understanding of the reforms needed to improve the sector. There is a potential for significant progress in enhancing educational outcomes through fostering collaboration and implementing targeted policy recommendations. Continued engagement among stakeholders, alongside strategic actions on the identified areas, is essential for building a more inclusive, equitable, and high-quality education system in Ethiopia.

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Strengthening School Inspection Systems to Improve Education Quality in Ethiopia

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Executive Summary

Education is a cornerstone of national economic and social development. For education to drive meaningful change, citizens must access quality education that fosters critical thinking and innovation. One of the key mechanisms to ensure educational quality is school inspection, which monitors teaching and learning processes, ensures accountability, and upholds standards. However, research shows that Ethiopia's education system faces persistent quality challenges, reflected in poor literacy, numeracy, and low national exam pass rates (MoE, 2022; World Bank, 2022). School inspection plays a vital role as both a monitoring and quality assurance tool (Jones & Tymms, 2014). This policy brief draws from the research "Elements of School Climate: Standards, Status, and Implications for Students' Academic Wellbeing in Secondary Schools." It critically examines the inspection system in Ethiopia, focusing on the Addis Ababa Education and Training Quality Regulation Authority (ETQRA) guidelines for accrediting and renewing licenses of secondary schools. It identifies gaps in the framework, including a focus on compliance over continuous improvement and limited attention to holistic quality dimensions. Drawing on national realities and international best practices, the brief proposes 15 actionable recommendations aimed at strengthening inspection through decentralization, stakeholder engagement, infrastructure, curriculum relevance, student well-being, multilingual instruction, and digital tools. Ultimately, it advocates for a forward-looking, inclusive, and student-centered inspection system that not only evaluates but guides schools toward lifelong learning and national development.

1. Introduction

Sustainable Development Goal 4 (SDG 4) emphasizes inclusive, equitable, and quality education and the promotion of lifelong learning opportunities for all (UN, 2015). Education is not only a fundamental human right, but also a catalyst for accelerating other SDGs, as it equips individuals with the knowledge, skills and behavioral maturity to drive economic development, reduce poverty, and improve health and well-being of nations (Cai & Wolff, 2022; Abera, 2023). Ensuring educational quality is therefore central to both national progress and global equity agendas.

Among the mechanisms employed to safeguard and improve educational quality, school inspection holds a unique position. School inspection is defined as the systematic external

evaluation of educational institutions; it is typically conducted by government authorities to monitor school performances and ensure compliance with national standards and policy goals (Jones & Tymms, 2014). The process often encompasses evaluations of teaching effectiveness, student learning outcomes, leadership and management, school infrastructure, and student welfare. According to Matete (2009), inspection serves as a regulatory tool that helps to align school practices with national priorities, enhance accountability, and improve workforce competitiveness.

In Ethiopia, nevertheless, the current school inspection system has not achieved its intended impact. Persistent issues such as students' low competency in foundational literacy and numeracy coupled with alarmingly low pass rates, below 5%, on the national secondary school leaving examination since 2022, point to systemic weaknesses in educational delivery and oversight (MoE, 2022). While inspection is intended to be a driver of quality assurance and improvement, its implementation in the Ethiopian context has been limited by overemphasis on compliance, lack of consistent follow-up, insufficient capacity of inspectors, and weak linkage to school improvement plans.

This policy brief focuses on the school inspection framework implemented by the Addis Ababa Education and Training Quality Regulation Authority (ETQRA), particularly for accrediting and renewing licenses of secondary education providers. Drawing on both national insights and international best practices from countries such as the Netherlands, Finland, Singapore, and Rwanda, this brief critically examines the current model and offers practical, evidence-based recommendations. These aim to shift the focus of inspection from mere compliance toward supporting holistic, student-centered, and equity-driven school development.

2. Policy problem

Research consistently highlights the vital role of school inspection in assuring and enhancing education quality (UNESCO IIEP, 2018). Effective inspections must comprehensively assess all aspects of the school environment and engage stakeholders

In Ethiopia, the quality of education remains a critical concern, particularly at the secondary level. Indicators such as low reading and math proficiency in primary schools and a secondary

school leaving exam pass rate below five percent for three consecutive years highlight the depth of these challenges (MoE, 2022–2024). Despite annual inspections carried out by the Education and Training Quality Regulation Authority (ETQRA) with the aim of improving school standards and fostering conducive learning environments, the anticipated improvements in educational outcomes have not materialized (MoE, 2022–2024; Taddesse, 2021; World Bank, 2022).

This gap raises fundamental questions about the effectiveness of the current school inspection framework and its capacity to drive meaningful changes. Specifically, the inspection guidelines used by ETQRA for accreditation and license renewal of secondary schools in Addis Ababa warrant critical examination, as existing studies suggest they may not comprehensively address essential quality indicators or offer actionable feedback for school improvement (Taddesse, 2021; UNESCO IIEP, 2018).

Moreover, there is a scarcity of rigorous, evidence-based studies assessing the performance and impact of the existing inspection and inspectorate systems (Taddesse, 2021; UNESCO IIEP, 2018). This policy brief, thus, aims to fill this gap by identifying weaknesses in the current framework and offering strategic recommendations informed by international best practices. It is also meant to suggest techniques used to enhance the inspection process and ultimately improve the quality of secondary education in Ethiopia.

3. Opportunities

A well-structured and contextually grounded school inspection policy presents significant opportunities for improving the quality of education in Ethiopia. When designed and implemented effectively, school inspections can foster accountability, enhance teaching-learning processes, ensure safe and inclusive school environments, strengthen school leadership, and ultimately improve student academic quality and achievement (Jones & Tymms, 2014; Matete, 2021).

Global and regional experiences offer valuable lessons for reforming Ethiopia’s inspection system. For example, Finland’s decentralized model empowers teachers, parents, and local governments to collaboratively design curricula and select teaching resources, ensuring that

education remains relevant to future skills and workforce demands (Lavonen, 2017). Additionally, Finland integrates school inspection with broader student welfare plans, leveraging partnerships with universities, libraries, and community institutions to address infrastructure gaps (Kettunen, 2024).

Scotland's approach emphasizes student well-being, strong teacher-student relationships, and meaningful community engagement, recognizing that emotionally supportive environments are essential for effective learning (Bass, 2018). Meanwhile, Ghana's four-tiered inspection system—comprising whole-school, performance-based, compliance, and investigative inspections—demonstrates how diversified inspection models can provide a comprehensive understanding of school performance.

India's focus on regular syllabus updates and the integration of assessment methods that promote critical thinking and problem-solving skills highlights the importance of aligning inspections with 21st-century competencies. Similarly, Wales aligns its inspections with the goals of lifelong learning by prioritizing student well-being, holistic skill development, and inclusive education (Hanemann & Robinson, 2022).

By drawing on these global models and tailoring them to the Ethiopian context, there is a clear opportunity to enhance the effectiveness of school inspections and its contribution to systemic improvements in education quality across the country.

4. Key Policy Recommendations

To enhance the effectiveness of Ethiopia's school inspection system and improve education quality, the following policy recommendations are proposed. Each recommendation includes a brief description along with potential benefits (pros) and considerations or limitations (cons).

No.	Policy Recommendation	Description	Pros	Cons
1	Decentralize School Governance	Encourage decision-making at the local level by involving teachers, parents, and community members in school leadership and curriculum decisions.	Promotes responsiveness to local needs and community ownership	Requires capacity-building and coordination to avoid inconsistencies
2	Engage Stakeholders in Curriculum Design	Involve various stakeholders—teachers, parents, employers, and	Ensures curriculum relevance and	Coordination may delay processes

		community members—in need assessment practices and in shaping a curriculum that reflects local relevance and market needs.	cultural alignment	
3	Promote Student Welfare and Equity	Include student protection, inclusiveness, and equality as part of inspection criteria to create safe and supportive school environments.	Enhances engagement and learning outcomes	Requires resources and staff training
4	Strengthen Infrastructure and Resource Linkages	Foster partnerships between schools and institutions like universities, NGOs, and libraries to expand learning resources.	Improves access to materials and external expertise	Depends on availability and consistency of partnerships
5	Link Education to Real-World Applications	Introduce experiential learning practices such as hands-on projects and real-life problem solving into the curriculum.	Increases motivation and practical skills	Requires curriculum adjustments and new materials
6	Support Multilingual Education	Encourage instruction in both local and national languages to promote accessibility and inclusivity.	Enhances accessibility and inclusiveness	Requires additional materials and trained teachers
7	Implement Personal Learning Plans	Help students create individualized learning and career development plans with support from teachers and counselors.	Supports differentiated instruction and autonomy	Time-intensive for teachers and counselors
8	Institutionalize School Self-Evaluation	Mandate regular self-assessments and improvement reports as part of the school accountability system.	Promotes continuous improvement and reflection	Depends on schools' capacity for honest evaluation
9	Prioritize Student Well-being	Make emotional, social, and physical well-being of students a standard part of school evaluations.	Encourages supportive environments	Difficult to standardize and measure
10	Adopt a Multi-Tiered Inspection Model	Combine different inspection types (e.g., performance-based, compliance, whole-school) for a comprehensive evaluation system.	Enables comprehensive and flexible evaluations	Requires more personnel and resources
11	Monitor Core Subject Performance	Use achievement data in subjects like English, mathematics, and science to drive school improvement strategies.	Supports targeted interventions and accountability	May lead to overemphasis on testing
12	Enhance Assessment Standards	Revise assessments to focus on critical thinking, conceptual understanding, and problem-solving skills.	Promotes higher-order thinking and relevance	Demands training and exam redesign
13	Foster Lifelong Learning Values	Cultivate traits such as ambition, curiosity, and independent learning among students.	Builds independent and motivated learners	Hard to assess and undervalued in testing culture
14	Leverage Digital Tools for Progress	Utilize digital platforms to monitor student learning and	Enables data-driven support and	Requires infrastructure and

	Tracking	ensure effective use of formative assessments.	feedback	digital literacy
15	Address Social and Emotional Development	Integrate social-emotional learning (SEL) into teaching and school inspection criteria.	Supports holistic development	Needs trained staff and tailored resources

5. Conclusion

Strengthening Ethiopia's school inspection system requires a strategic, inclusive and evidence-based approach. This policy brief has outlined practical recommendations grounded in both international best practices and the Ethiopian context. Emphasizing stakeholder engagement, equity, multilingualism, infrastructure development, and real-world learning will ensure that inspections do more than assess—they will inspire and guide lasting improvements. A more holistic, decentralized, and student-centered approach will elevate the quality of education, foster accountability, and empower schools to become agents of transformation. Moving forward, successful implementation will depend on committed leadership, collaborative partnerships, and continuous capacity building across the education system.

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Enhancing Graduate Competency and Workforce Alignment in Ethiopian Higher Education

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Executive summary

This study investigated public higher education institutions' potential barriers in producing competent graduates. It employed descriptive mixed research design in which a multistage stratified random sampling technique was used to select research samples from selected universities. Results reveal significant gaps between current educational practices and the demands of the job market. The data indicates that a considerable portion of instructors identify curriculum misalignment with industry standards, inadequate practical exposure, and insufficient mentoring during internships as major obstacles. These challenges highlight not only the critical need for curriculum reform but also the imperative to enhance university infrastructure and support services. Furthermore, as highlighted by the survey, issues such as inadequate facilities, lack of support for innovative teaching practices, and insufficient opportunities for practical engagement in community and industry settings detract from the overall educational experience. Essential competencies such as digital literacy and entrepreneurial skills are not being adequately addressed, which may leave graduates becoming ill-prepared for the workforce. This calls for the need to reform the focus and practices of the educational system to address the timely need for digital and entrepreneurial skills.

1. Introduction

Research findings unveil that Ethiopian Higher Education Institutions (EHIs) face several challenges that affect the quality of education and the employability of graduates. These challenges include problems linked to curriculum content and focus alignment to the world of work, lack of industry linkage, unfavorable working conditions, a mismatch between graduates' skills and job market needs, and limited practical skills among graduates (Mulu, 2012; Tefera & Wudu, 2016; Berhanmeskel & Fisseha, 2024). On the other hand, Ethiopian Higher Education Institutions (EHIs) have traditionally adopted top-down educational curriculum policy reforms, focusing on changes at higher levels (Asalf, Maheshwari, & Yadav, 2023; Suleiman, 2023). While these reforms aim to improve educational outcomes, there is a need to evaluate the effectiveness of the curriculum content and focus at lower levels and align the education with current industry and societal needs.

2. Policy Problems (Key Issues)

Ethiopian Higher Education Institutions (EHIs) face a range of structural and operational challenges that hinder the production of competent, job-ready graduates. One of the most pressing issues is the unfavorable learning environment and working conditions in many universities. Poor infrastructure, limited access to educational resources, and inadequate administrative support negatively impact both student learning and staff productivity. In addition, there is a growing mismatch between the skills graduates possess and the demands of the labor market. Many graduates leave universities without practical skills, soft skills, or digital competencies necessary to succeed in today's dynamic job landscape, contributing to high unemployment and underemployment rates among the youth.

A critical contributing factor to this skills mismatch is the continued emphasis on theoretical instruction, with limited opportunities for students to engage in practical, hands-on learning. This is compounded by a lack of modern laboratory facilities, insufficient internship programs, and minimal exposure to real-world problem-solving. Furthermore, curriculum reforms in Ethiopian universities have largely been implemented through top-down approaches that prioritize policy compliance over contextual relevance. These reforms often fail to incorporate feedback from instructors, students, or industry stakeholders, resulting in curricula that are misaligned with current workforce and societal needs.

The problem is further exacerbated by weak linkages between universities and the private sector. Many higher education institutions lack formal partnerships with industries, community organizations, or other stakeholders that could provide mentorship, internship opportunities, and practical insights. Without these collaborations, universities are unable to offer students the applied experiences necessary to transition smoothly from academic settings to professional environments. Collectively, these challenges underscore the urgent need for systemic reforms aimed at improving educational quality, aligning academic outputs with labor market demands, and fostering stronger university-industry engagement.

3. Opportunities

Addressing the challenges facing Ethiopian Higher Education Institutions presents a significant opportunity to transform the higher education system into a more responsive, inclusive, and

innovation-driven sector. One of the key advantages of engaging in meaningful reform is the potential to enhance the quality and relevance of education, thereby producing graduates who are better equipped with the knowledge, skills, and attitudes required by the modern workforce. By revising curricula to align with labor market needs, investing in infrastructure, and promoting stronger university-industry linkages, EHIs can foster a generation of graduates who are more employable, entrepreneurial, and capable of contributing to national development.

Implementing the proposed policy measures can yield several benefits. First, universities will be better positioned to close the skills gap through competency-based education and practical learning models. This will not only improve graduates' job readiness but also reduce unemployment rates and underemployment among the youth. Second, continuous professional development for educators will enhance teaching quality, foster innovative pedagogical approaches, and ensure that instruction keeps pace with technological and industrial trends. Additionally, inclusive learning environments supported by adequate infrastructure can increase access and success for all students, including those with disabilities.

Globally, there are several successful models that Ethiopia can learn from. For instance, Germany's dual education system integrates vocational training with academic instruction through strong partnerships between universities and industries, which has significantly improved graduate employment outcomes (Euler, 2013). Similarly, Finland's decentralized curriculum design allows for local adaptability while promoting digital literacy and critical thinking skills which are crucial for the 21st century workplace (Lavonen, 2017). Rwanda's higher education policy reforms have emphasized STEM education, entrepreneurship, and digital learning, leading to increased innovation and private sector engagement (World Bank, 2020). These examples illustrate that countries that prioritize practical skill development, stakeholder involvement, and alignment with market realities tend to experience stronger education-to-employment transitions.

Adopting a similar approach in the Ethiopian context, grounded in its unique needs and priorities, can drive sustainable educational improvements. With the right policies, leadership commitment, and stakeholder collaboration, Ethiopia has the potential to develop a dynamic higher education system that contributes meaningfully to national economic growth and social progress (Goetz, 2019).

4. Key Policy Recommendations

Policy Area	Recommendation	Purpose/Outcome
Learning Environment & Conditions	Improve physical infrastructure, address unfavorable working conditions, and enhance decision-making responsiveness.	Boost productivity, morale, and effective teaching-learning.
Graduate Skill Alignment	Conduct periodic tracer studies to assess skill gaps and align curricula accordingly with market and societal needs.	Ensure graduates are market-ready and reduce unemployment.
Curriculum Reform	Revise university curricula in consultation with industry stakeholders to reflect current trends and job market requirements.	Increase curriculum relevance and employability of graduates.
Industry Linkages	Establish sustainable partnerships with industries for internships, joint research, and mentorship programs.	Foster practical skill development and job readiness.
Educator Development	Implement continuous professional development (CPD) programs on modern pedagogy, digital tools, and industry trends.	Enhance teaching effectiveness and bridge theory-practice gaps.
Infrastructure Investment	Allocate funding for modern labs, ICT tools, and inclusive learning spaces (e.g., for students with disabilities).	Provide hands-on learning experiences and inclusivity.
Support for Innovative Teaching	Create platforms and provide resources for educators to experiment with and implement active learning and blended teaching strategies.	Improve student engagement and outcomes.
Digital & Entrepreneurial Skills	Integrate digital literacy, soft skills, and entrepreneurship training into all programs through workshops and real-world projects.	Equip students with 21st-century competencies.

5. Conclusion

Ethiopian Higher Education Institutions stand at a pivotal juncture, where addressing long-standing challenges presents a unique opportunity to transform the educational landscape. By realigning curricula with labor market demands, strengthening university-industry partnerships, and investing in infrastructure and faculty development, EHIs can enhance graduate competencies and foster a more dynamic, employable workforce. The proposed policy actions and strategic implementations, informed by both national insights and global best practices, offer a clear pathway toward a more inclusive, relevant, and quality-driven higher education system. Sustained commitment from all stakeholders—government, academia, and industry—is essential to ensure these reforms yield meaningful, long-term impact.

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Transforming Initial Teacher Education for 21st Century Classrooms

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Executive Summary

This policy brief addresses the issues facing the Initial Teacher Education (ITE) system in Ethiopia, whose failure to prepare teachers adequately for 21st century classroom realities has drawn increasing concern. The brief highlights the need for a shift away from a theoretically heavy curriculum to one that balances theoretical knowledge with practice focusing on core skills: collaboration, creativity, and digital literacy. It points out the weaknesses of teacher training: not putting enough focus on technology integration and real teaching practices that results in graduates being not sufficiently prepared to deal with diverse learning environments and challenges. The brief also identifies several systemic issues, such as ineffective recruitment processes, unsatisfactory partnerships between schools and universities, and insufficient teacher development. These issues are all contributing factors to high dropout rates and a general lack of qualified teachers. Furthermore, the lack of retention strategies for teachers and the sporadic use of ICT act to exacerbate these issues impacting learning outcomes and educational success. Hence, the brief proposes a series of reforms that involve the integration of evidence-informed practices, enhancing curriculum applicability to practical teaching needs and stronger collaborations among learning institutions, policymakers, and communities to address the challenges. Ultimately, the policy brief calls for a holistic strategy to reform the ITE system in Ethiopia with a focus on improving resources, teacher competencies, and alignment of teacher education programs with the skills required in modern classrooms. This includes incorporating technology into the curriculum, promoting innovative pedagogy, and rendering research-based teacher training and responsive to the evolving needs of the education system. Ethiopia can build a more capable and adaptable teaching force while improving educational performance and country development in the long-term by working towards the realization of the policy options forwarded.

1. Introduction

The 21st century presents challenges and opportunities for education, particularly in developing countries like Ethiopia (Fullan & Hargreaves, 2017). Quality education requires core 21st century skills: learning (collaboration, communication, creativity, critical thinking), literacy (information analysis, digital competence), and life skills (self-awareness, resilience, empathy) (Pardede, 2010). Initial Teacher Education (ITE) is crucial for preparing educators but often emphasizes theory over practice, making it inadequate for modern demands (Ingersoll & Smith, 2003). Effective ITE should integrate global perspectives, inclusive teaching strategies, and research-based practices (Banks, 2008; Mishra & Koehler, 2006).

Continuous teacher learning enhances reflective practice, collaboration, and student outcomes (Timperley et al., 2007). Mentorships, action research, and Technological Pedagogical Content Knowledge (TPACK) ensure digital tool integration (Backfisch et al., 2024). Developing teacher dispositions like empathy and cultural responsiveness fosters inclusive learning (Darling-Hammond, 2010). Addressing teacher recruitment and retention through better working conditions and leadership opportunities is also vital (Ingersoll & Strong, 2011).

Ethiopia's ITE system has expanded significantly, from a single pre-primary training institution in 1982 to 38 colleges by 2024 (MoE, 2024). Reforms, such as the 2003 Teacher Education System Overhaul (TESO) and the Postgraduate Diploma in Teaching (PGDT), have shifted the focus from content-heavy curricula to pedagogy (Semela, 2014). However, the 21st century skills remain underemphasized. A research-driven ITE system should integrate pedagogical content knowledge, prioritize teacher learning, and address recruitment challenges to cultivate skilled educators. This policy brief outlined effective ITE strategies, propose restructuring to enhance competencies, and recommend collaboration between universities, schools, and the Ministry of Education to improve teacher preparation.

2. Policy problem

Current Initial Teacher Education (ITE) programs seem incapable of adequately training educators for the demands of the 21st century classrooms (European Commission, 2013; Ingersoll, 2019; Korthagen et al., 2006). They frequently prioritize these teachers' theoretical knowledge over practical work, which is fundamental for teaching (Darling-Hammond et al., 2017; Grossman et al., 2009; Ingersoll, 2019). In addition, many ITE program syllabuses pay scant attention to the inclusion of technology, which results new teachers being unable to use various digital devices in their teaching (European Commission, 2013; Johnson et al., 2016). A further worrying issue is the inadequate faculty collaboration among ITE programs, schools, and communities, which restricts the possibilities of experiential learning and practice (Darling-Hammond et al., 2017; Korthagen et al., 2006).

Fekede and Temesgen (2020) also cite additional teacher preparation challenges in Ethiopia, where ITE programs are struggling to recruit highly qualified candidates and deliver high-quality training. Unstable school-university relationships, disproportionate focus of teacher education

compared to other areas of study, and mismatches between policy environments and classroom realities also undermine program quality. Moreover, the absence of teacher retention strategies and infrequent application of information and communication technology (ICT) exacerbate these shortages. ITE graduates thus often have problems with classroom management, generating student motivation, and addressing diverse learning needs (Ingersoll, 2019; Johnson et al., 2016). These shortages negatively impact student learning, undermining academic achievement and future opportunities.

ITE programs must undergo significant reforms by integrating more practical experiences, improving technology use, and fostering stronger collaborations with schools and communities to enhance teacher preparation (Darling-Hammond et al., 2017; European Commission, 2013). A comprehensive approach that balances theory and practice will better prepare future educators with the skills, knowledge, and adaptability needed for today's dynamic classrooms. Addressing these gaps is essential to ensure that educators can meet the evolving demands of modern education and effectively support student learning and development. Given the pressing nature of these challenges, reforming ITE programs is both urgent and imperative.

3. Analysis of the Issue

The study draws attention to a serious problem with initial teacher education programs, which results in low enrollment and student dropout rates because of things like incentive packages and a lack of professional focus. This discrepancy is especially noticeable in Sub-Saharan Africa, where students frequently pursue jobs right away rather than having a sincere interest in the subject. The results run counter to the teacher education system's emphasis on interpersonal skills, commitment, and a positive outlook (Taylor & Robinson, 2019).

Besides, critics revealed that the initial teacher education program's curriculum lacks emphasis on pedagogical and subject matter knowledge, a gap between universities and materials, and disregards socio-emotional learning and emergency education skills. They suggest revising the curriculum to address these issues, using a better selection system, addressing content and pedagogical competencies, and incorporating professional development and lifelong learning concepts (Ravitch & Hargreaves, 2021).

Furthermore, studies argue that pedagogical practices lack real-world experiences, leading to theory-heavy courses and difficulty for graduates. Teacher trainers often mimic their teachers' methods, causing a pedagogical gap that hinders students' learning needs and workforce readiness. The initial teacher education program's practicum-focused approach is criticized for its shortcomings in terms of materials, curriculum presentation, and resources. Students' real-world experiences are impacted, and social justice and equity are hampered (Timperley et al., 2007). In this regard, the research report also urges policy, perception, and practice changes to close quality gaps and boost enrollment. They further contend that opportunities for skill transfer are limited by a lack of coordination between training facilities and educational institutions.

In general, Ethiopia's education system lacks a focus on 21st century skills in its curriculum and pedagogical practices, which results in low enrollment rates and a severe teacher shortage. This crisis poses a serious threat to the education sector and has an impact on the nation's peace, employment prospects, and literacy rates. A multifaceted strategy is needed to address the shortcomings in teacher education, including enhancing resources, curriculum, teacher trainer competency, and student admission (Taylor & Robinson, 2019). Better curriculum review, lifelong learning, and professional development principles are all part of this.

4. Policy Options

S.N.	Policy Options	Key Activities	Pros	Cons
1	Implement stringent selection criteria for prospective teachers	Raising the bar for entry into teacher education programs can attract top-performing students with a genuine passion for teaching. Competitive entrance exams, interviews, and assessments	• Attracts highly qualified and motivated individuals • Enhances the quality of the teaching workforce	• Requires time and resources to change the public attitude towards the profession • Getting enough number of students with the current criteria is difficult let alone with stringent criteria • Requires significant resources for implementation
2	Revise and align the ITE curriculum	Integrate theoretical knowledge with practical applications, focus on essential skills and competencies	• Ensures relevance and practicality • Prepares teachers for diverse and dynamic environments	• Requires collaboration among various stakeholders • May face resistance to change
3	Embed research-based practices into teacher education programs	Incorporate action research and evidence-based methodologies	• Enhances effectiveness of teacher training • Fosters a culture of continuous improvement	• May require additional training for educators • Can be resource-intensive
4	Promote innovative and engaging teaching methods	Train in diverse pedagogical approaches, use of digital tools and resources	• Enhance student engagement and learning outcomes • Prepares educators for technological advancements	• Requires ongoing professional development • May face resistance from traditional educators
5	Establish mentoring and induction programs	Provide continuous support through mentoring and induction programs	• Supports new teachers in their transition • Improves teaching	• Requires experienced mentors • May be challenging to implement in

			practices and retention	remote areas
6	Foster collaboration between universities, schools, NGOs, and policymakers	Create structured partnerships and clear communication channels	• Enhances quality and relevance of teacher education • Leads to improved educational outcomes	• Requires coordination among multiple stakeholders • May face bureaucratic challenges
7	Increase funding and resources for ITE programs	Allocate adequate funding for modern facilities and teaching materials	• Improves quality of education • Creates conducive learning environments	• Requires significant financial investment • May face budgetary constraints

5. Recommendations

Based on the findings of this study, the following suggestions are drawn: A research-driven ITE system should integrate pedagogical content knowledge, prioritize teacher learning, and address recruitment challenges to cultivate skilled educators. Moreover, multifaceted strategy is needed to address the shortcomings in teacher education, including enhancing resources, curriculum, teacher trainer competency, and student admission. Furthermore, a comprehensive approach that balances theory and practice will better prepare future educators with the skills, knowledge, and adaptability needed for today's dynamic classrooms.

6. Conclusion

In conclusion, the Ethiopian education system faces critical hurdles in preparing teachers for the demands of the 21st century. While expansions and reforms have been implemented, significant gaps remain in practical experience, technology integration, and collaboration between institutions. Addressing these challenges requires a multi-faceted approach, including curriculum revisions, enhanced teacher training, stronger school-university partnerships, and strategic recruitment and retention initiatives. Prioritizing these improvements is essential to cultivate skilled educators who can foster student learning and contribute to Ethiopia's future prosperity and stability.

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Implementing High Quality Internships as Part of Practically-Oriented, Application-Based Degree Programs in Ethiopian Universities of Applied Sciences

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Executive Summary

Following comprehensive pilot projects implemented in Jigjiga University and Kotebe University of Education, critical gaps and opportunities have been identified in the design and implementation of high-quality internships within Ethiopia's Universities of Applied Sciences (UASs). The project outputs highlight the need to include practically-oriented, application-based internships as an integral part of tertiary education programs, particularly to bridge the theory-practice divide and enhance graduates' career readiness. The pilots demonstrated the transformative potential of strong university-industry (university-school) partnerships. When internships are well-structured, aligned with academic goals, and supported through dedicated mentorship, students show enhanced professional engagement and deeper learning. The universities developed new tools such as mentorship checklists, evaluation templates, and structured hosting agreements that offer valuable models for broader replication. However, significant implementation challenges were also reported. These include shortage of internship periods, limited financial and logistical support, insufficient baseline data collection, weak follow-up mechanisms, and difficulties in aligning curriculum with industry needs. Moreover, the absence of incentives for faculty and the limited availability of suitable industry placements remain critical bottlenecks. Based on the findings, this policy brief recommends systemic reform to strengthen the quality and relevance of internship programs in Ethiopian UASs. Key recommendations include: establishing structured and funded university-industry linkage offices; integrating internship preparation into curricula; offering incentives for academic mentors; co-developing programs with industry partners; and adopting national guidelines and toolkits informed by the pilot experiences. Strengthening the practical learning environment will be vital to producing skilled, employable graduates and building a responsive higher education system aligned with Ethiopia's development goals.

1. Introduction

Internships play a critical role in equipping students with employability skills across multiple dimensions (Silva et al., 2016; Ansari, 2025). This provides students with the opportunity to evaluate their abilities, beliefs and attitudes in relation to specific tasks or career pathways (Howery, 1983). Internship also plays a pivotal role to ensure a smooth transition from student life to the work place environment (Kapareliotis et al., 2019).

In countries like Ethiopia; where financial constraints are pervasive and graduate unemployment rates remain high; internships provide essential work-based learning opportunities (Ogden et al., 2024; Jongsermtrakoon et al., 2025). Universities of Applied Sciences in the Country are thus

expected to deliver high-quality internships that enable students to gain practical experience, develop professional competencies, and improve their job prospects. Despite its importance, internship program faces systemic challenges such as limited industry capacity, inadequate monitoring mechanisms, and financial barriers (Gashaw, 2019). This policy brief presents opportunities and challenges encountered during the implementation of high quality internship programs at Kotebe University of Education and Jigjiga University through the FAITH project, and proposes actionable policy recommendations.

2. Policy Problems

This policy brief is developed in alignment with the pilot project implemented on High-Quality Internships as Part of Practically-Oriented, Application-Based Degree Programs" in two selected Ethiopian UASs (Jigjiga University and Kotebe University of Education).
The key issue that hinders the implementation of internship in Ethiopian UASs is the limited industry partnerships, as few companies are willing or adequately equipped to host interns. Additionally, inadequate supervision; due to a lack of qualified industry mentors and infrequent follow-ups from universities further hampers the effectiveness of internships. Many internship opportunities also fail to align with students' academic goals or skills set, reducing their relevance and impact. Financial and logistic related constraints exacerbate the problem, as insufficient stipends force students to seek local but irrelevant placements rather than pursuing career-aligned opportunities. These systemic gaps weaken the ability of internships to prepare students for the workforce, contributing to persistent unemployment and skills mismatches in the labor market. Addressing these challenges is critical to enhance the employability of graduates and ensuring that education translates into meaningful economic participation.

3. Opportunities for Implementing High Quality Internship

The following opportunities were identified during the implementation of internships by the project FAITH.

Table 1: Opportunities for implementing high quality internship

Opportunities	Descriptions
Bridging the skills gap	Internships provide students with the chance to develop practical skills that balance their academic knowledge, helping to link between education and the workforce.

Strengthening university-industry collaboration	Enhancing internships can foster stronger relationships between universities and industries, ensuring that curricula align with industry needs and increasing collaboration for future workforce demands.
Policy-driven improvement	With the introduction of targeted policies, internships can become more structured, standardized, and effectively supported, addressing current gaps in funding, supervision, and implementation frameworks.
Empowerment	Internships can play a pivotal role in empowering young people by offering them exposure to the professional world, enhancing their confidence and career readiness.
Economic growth	A skilled workforce attracts investment and supports Ethiopia's industrialization goals.

4. Challenges

The following are key challenges identified during the implementation of internship by the project FAITH:

Table 2: Challenges that hinder the implementation of high-quality internship

Challenges	Descriptions
Institutional barriers	Weak industry linkage offices and unclear roles for universities and companies hinder effective collaboration.
Financial resource constraints	Lack of funding for student stipends, transportation, and supervisor training undermines internship quality and accessibility.
Cultural gaps	Many industries perceive interns as burdens rather than contributors, affecting willingness to engage and mentor.
Absence of clear internship models	There is no standardized or well-communicated internship model that guides implementation and expectations.
Industrial personnel skills	Industry supervisors often lack training or clarity on their roles and responsibilities in guiding student interns.
Mismatch between curriculum and industry needs	Curricula are not regularly updated to reflect industry trends, leading to skill gaps and reduced internship relevance.
Monitoring and evaluation gaps	There are no consistent systems to track student performance or assess the effectiveness of internship programs.
Limited career services and support	UASs typically lack structured career offices or placement support systems, making it difficult for students to access and benefit from internships.

5. Key Policy Recommendations

Recognizing the potential opportunities and challenges identified during the implementation of the pilot project, the following key policy recommendations are forwarded:

Table 3: policy recommendations to implement high quality internship

Policy Option	**Key Action**	**Pros**	**Cons**	**Stakeholders**
Strengthen University –Industry Collaboration	Formalized structured partnership platforms, incentivize applied research and training, strengthen accountability, strengthen university-industry linkage offices.	Enhances partnership development, monitoring, and accountability.	Requires budget for staffing and operations.	Ministry of Education, Universities, Private Sector
Integrating internship preparation into curricula	Align curriculum with industry needs, develop structured internship support programs, adopt suitable internship models, institutionalize policies for internship quality assurance	Enhance skill development, stronger industry-academia collaboration, structured learning experience, higher student engagement	Logistical and administrative challenges, financial and resource constraints, limited flexibility for students,	MoE, Universities, Industries
Co-developing programs with industry partners	Establish structured industry-advisory committees, Integrate work-based learning into curriculum, facilitate faculty and industry staff exchange,	More practical, job focused, higher graduate placement, funding, access to network and jobs	Less theoretical depth, over specialization, commercial influence on education, favor elite institutions	MoE, Universities, Industries, Community, development partners
Standardize supervision training	Develop national/institutional supervision framework, provide trainings to the suppervisors, establish continuous support	Improves mentorship quality; aligns expectations.	Financial resources and time investment.	Universities, Industries, Development

Policy Option	Key Action	Pros	Cons	Stakeholders
	systems			Partners
Increase funding & stipends	Institutionalize funding mechanism, incentivize industry participants, link stipends to performance metrics	Enables students to accept placements far from home; reduces dropout.	Fiscal constraints; need for sustainable funding mechanisms.	MoE, MoF Universities Private Sector, Donors
Develop digital monitoring tools	Build a digital platform, integrate AI-driven analytics and ensure stakeholder adoption and training	Tracks student progress, ensures feedback loops.	Requires tech, infrastructure and training.	Universities, IT Firms
Promote sector-specific internships	Map high-growth sectors and skills demand, create sectoral internship hubs and offer sector-linked incentives	Aligns placements with regional industry needs.	Limited companies in niche sectors.	Regional Governments, Chambers of Commerce

6. Conclusion

Ethiopia's internship programs hold immense potential to transform the education and employment outcomes of the Universities of Applied Sciences. By implementing these recommendations; strengthening institutional frameworks, investing in partnerships, and adopting flexible models, UASs can create a robust internship ecosystem. Policymakers, universities, and industries must collaborate urgently to address funding, supervision, and equity gaps, ensuring internships become a cornerstone of Ethiopia's skilled workforce development.

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Bridging the Gap between University and Industries for Sustainable Educational Environment: Engaging University Professors and Industry Professionals

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Executive Summary

In the current landscape of higher education in Ethiopia, the persistent disconnect between universities and industries have emerged as a critical challenge to build a responsive, practice-oriented, and sustainable education system. Despite the growing number of university graduates each year, many remain unemployed or underemployed due to a mismatch between academic preparation and labor market demands. Ethiopia's Universities of Applied Sciences (UASs), in particular, are mandated to deliver skill-based, demand-driven education that aligns closely with local and regional industry needs. However, the absence of systematic engagement mechanisms, joint initiatives, shared infrastructure, and enabling policy frameworks has hindered the realization of this mandate. Professors often lack practical industry exposure, while industry experts are rarely involved in academic processes such as curriculum co-design, guest lecturing, or applied research. This policy brief draws on practical experiences from Wolaita Sodo University and Jigjiga University, which demonstrated promising models of collaboration, such as joint research with industrial parks and international partners, technology transfer to SMEs, staff exchange programs with diaspora professionals, and co-developed curricula with local manufacturers. These cases highlight scalable strategies and provide a foundation for policy recommendations aimed at institutionalizing university-industry linkages nationwide. A coordinated national approach is essential to maximize these efforts, improve educational relevance, and position universities as engines of innovation, entrepreneurship, and inclusive development. Besides, this policy brief emphasizes the urgent need to bridge this divide by fostering meaningful, structured collaboration between university professors and industry professionals to enhance graduate employability and national development.

1. Introduction

In today's knowledge-driven global economy, strong collaboration between academia and industry is a proven driver of innovation, economic growth, and workforce competitiveness. However, in Ethiopia, this partnership remains weak and fragmented, particularly within the newly differentiated Universities of Applied Sciences (UASs) that were intended to bridge education and practice (Hunde et al., 2023). Instead of fostering dynamic, real-world learning environments, many UASs continue to follow traditional academic models that isolate them from industry needs. Professors often lack exposure to evolving market trends, while industry professionals are rarely engaged in curriculum design, research collaboration, or internship supervision. As a result, university graduates frequently enter the labor market with theoretical

knowledge but insufficient practical skills, contributing to youth unemployment and underutilized human capital.

The urgency of addressing this gap is reinforced by global and local evidence. The World Economic Forum (2022) reports that nearly 50% of employers struggle to find graduates with relevant skills, while the OECD (2021) links strong academia-industry collaboration with higher innovation and GDP growth. Similarly, the European Commission (2020) calls for universities to become more entrepreneurial and aligned with labor market needs. Ethiopia's own labor market assessments reflect these concerns, revealing a significant mismatch between graduate capabilities and employer expectations (MoE, 2018). Bridging this divide requires a systematic, policy-initiated approach to strengthen partnerships, integrate industry knowledge in academia, and re-align higher education missions and engagements with the demands of a rapidly evolving economy.

2. Opportunities for Strengthening University-Industry collaboration

Strengthening collaboration between universities and industries presents a wide range of opportunities for Ethiopia's education system, economy, and innovation landscape.

Table 1: Opportunities for Strengthening University-Industry collaboration

Opportunity	Description
Enhancing Workforce Readiness	Aligns university curricula with labor market demands, producing industry-ready graduates.
Boosting Research Commercialization	Translates academic research into practical innovations, supporting entrepreneurship and industrial growth.
Economic Growth	Drives technological advancement, industrial productivity, and inclusive development through innovation and skilled manpower.
Increased Funding and Investment	Encourages co-investment in research, infrastructure, and innovation hubs.
Global Best Practices	International models (Germany (Dual Education), Singapore (Industry Collaboration), USA (IUCRC).) offer adaptable frameworks to strengthen linkages.
Dual Study Program	Combines academic education with practical work in industries to enhance graduate employability.
Mutual Benefit and Trust Building	Fosters long-term, ethical partnerships through mutual respect and aligned interests.
Clear Shared Vision and	Aligns university and industry objectives for sustainable and

Strategic Goals	relevant education.
Industry Participation in Curriculum Design	Ensures curriculum reflects real-time industry needs and trends.
Short-Term Market Responsive Programs	Develops rapid training programs to fill urgent skill gaps in emerging industries.

3. Challenges Hindering Strengthening University-Industry collaboration

Despite increasing awareness of the need for university-industry collaboration in Ethiopia, key challenges persist, including institutional rigidity, limited funding, cultural misalignment, bureaucratic delays, and unresolved intellectual property (IP) issues (Table 2). A 2019 World Bank report highlights that developing countries struggle with weak academia-industry ties due to a lack of incentives, while the UK's 2021 Higher Education Report found that only 38% of university research outputs are effectively commercialized.

Table 2: Challenges Hindering University-Industry Collaboration in Ethiopia

Challenge	Description
Institutional Rigidity	Traditional academic structures and bureaucratic hierarchies make it difficult to adopt flexible, industry-responsive approaches.
Funding Constraints	Insufficient financial resources restrict joint research, innovation programs, and infrastructure co-development with industries.
Cultural Differences	Universities focus on long-term knowledge generation, while industries prioritize short-term profitability—leading to misaligned expectations.
Bureaucratic Barriers	Lengthy approval processes, unclear partnership protocols, and administrative delays discourage timely and efficient collaboration.
Intellectual Property (IP) Issues	Lack of clear IP frameworks and disputes over ownership of jointly developed innovations deter both academic and industrial partners.

4. Policy Recommendations

Table 3: Policy Options for Enhancing University-Industry Collaboration

Policy Option	Key Actions	Cons	Pros	Stakeholders
Strengthen industry-academia collaboration centers	- Create dedicated centers for collaboration and knowledge exchange	- Requires initial funding and institutional buy-in	- Facilitates knowledge exchange and research commercialization	MoE, UASs, Industry proponents
Develop joint research and innovation grants	- Provide funding for joint research initiatives between universities and industries	- Potential for misuse or misallocation of funds	- Encourages applied research and innovation	MoE, MinT Private Sector, R&D Institutions
Introduce industry-led curriculum development	- Involve industry professionals in curriculum design and updates	- Resistance from traditional academic structures	- Aligns education with industry needs, improving employability	MoE, UASs, Industry Representatives
Implement tax incentives for industry-academic partnerships	- Provide tax benefits for companies collaborating with universities on research and innovation	- May lead to financial trade-offs for governments	- Encourages private sector investment in research	MoE, MoF, UASs
Facilitate industry sabbaticals for Professors and internships for students	- Create opportunities for professors to take sabbaticals in industry and for students to engage in internships	- Logistical challenges in implementation	- Enhances real-world exposure and knowledge transfer	MoE, UASs, Industry Partners
Establish intellectual property (IP) frameworks	- Develop clear IP agreements to govern research collaboration and commercialization	- Complex to negotiate and implement	- Encourages research commercialization while protecting rights	MoE, Universities, Industry Partners
Provide Funding for Technology Transfer Offices (TTOs)	- Set up or strengthen TTOs in universities to facilitate the commercialization of innovations	- Requires sustainable financing and staffing	- Accelerates innovation commercialization	MoE, MinT, UASs, Innovation Hubs

5. Conclusion

Bridging the gap between academia and industry is crucial for enhancing Ethiopia's higher education system, ensuring that graduates are equipped with the skills and knowledge needed to thrive in the workforce. The proposed policy options, ranging from establishing industry-academia collaboration centers to facilitating industry sabbaticals and developing joint research grants, offer a comprehensive approach to fostering stronger, mutually beneficial partnerships. While challenges such as funding constraints, institutional rigidity, and cultural differences remain, the potential benefits of improved workforce readiness, economic growth, and innovation make these efforts essential. By engaging both universities and industries in the development of a cohesive, sustainable educational ecosystem, Ethiopia can position itself for long-term prosperity and global competitiveness.

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Enhancing Demand-Driven Applied Research and Technology/Knowledge Transfer in Ethiopian Universities of Applied Sciences

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Executive Summary

Globally, Universities of Applied Sciences (UASs) are undergoing a critical transformation by shifting toward demand-driven applied research and technology/knowledge transfer. This strategic reorientation ensures academic research directly responds to real-world challenges identified by industries, businesses, and local communities. The insights in this policy brief emerge from two pilot projects implemented at Jigjiga and Wolaita Sodo Universities. These initiatives demonstrated how universities can conduct high-quality applied research with tangible impacts while developing effective mechanisms for transferring research outputs. The pilots revealed significant opportunities for Ethiopian UASs to contribute to national development through demand-driven research, including alignment with government priorities, enhanced research capacity, and more efficient use of resources. Additionally, the projects showed how localized problem-solving and accelerated technology transfer can spur job creation and support evidence-based policymaking. However, the pilot projects also exposed critical challenges that must be addressed to scale these efforts nationwide to all UASs. Institutional barriers, funding limitations, and gaps in researcher expertise hinder the potential of demand-driven research. Furthermore, weak stakeholder engagement, inadequate monitoring systems, and sociocultural resistance to innovation present additional obstacles. To overcome these constraints, this policy brief proposes actionable recommendations such as establishing national implementation guidelines, fostering stronger university-industry partnerships, and developing digital platforms to connect research with market needs. Incentive structures for industry collaboration and flexible, innovation-oriented curricula are also essential to sustain progress. By adopting these measures, Ethiopian UASs can fully embrace their role as drivers of innovation and socioeconomic development. The transition to demand-driven research and effective knowledge transfer will enable universities to produce solutions that matter - transforming research into real-world impact while supporting Ethiopia's sustainable growth agenda. This policy brief provides a benchmark for turning these aspirations into institutional practice across Ethiopia's higher education landscape.

1. Introduction

In Ethiopia, Universities of Applied Sciences (UAS) are increasingly focusing on demand-driven applied research and technology transfer to tackle local development challenges. This model emphasizes practical, community-based research that addresses the needs of local industries, farmers, and communities through stakeholder collaboration. Supported by government policies and donor programs, UAS contribute to innovation and sustainable development in sectors like agriculture, health, education, and rural development. Knowledge transfer is facilitated through

extension services, training, and incubation centers, enhancing local capacities and socio-economic outcomes. However, challenges such as limited funding, infrastructure, and coordination remain (African Development Bank, 2022; Abate, 2018).

Ethiopia faces pressing challenges in agriculture, health, and livelihoods, with over 80% of the population reliant on subsistence farming (Yigezu, 2021). Despite abundant research outputs, a significant gap exists between knowledge generation and practical application. Studies reveal that only a fraction of agricultural innovations reach end users due to weak extension systems and limited stakeholder engagement. Unemployment among graduates is rising, reflecting a mismatch between education and labor market needs. These issues underscore the urgency for demand driven applied research and effective technology transfer in UASs to ensure innovations are relevant, accessible and capable of addressing real life community and development challenges.

2. Policy Problem

There are several key policy gaps hindering the effectiveness of demand-driven applied research and technology/knowledge transfer within Universities of Applied Sciences (UASs) in Ethiopia. One major gap is the lack of clear national or institutional policy frameworks that guide the prioritization, funding, and evaluation of such research, resulting in a disconnect between academic outputs and the practical needs of industries or communities (MoSHE, 2020; ASTU, 2023). Moreover, there are weak linkages among stakeholders, with limited collaboration between UASs and industries, especially in rural areas, due to the absence of structured mechanisms or incentives for partnerships (Gebreeyesus and Mohnen, 2013). Researchers also face insufficient support, as academic promotion and funding structures prioritize publications over practical impacts or industry engagement, thereby discouraging involvement in applied research and technology transfer (WB, 2019; GIZ, 2020). Capacity building is another significant gap, as UASs often lack the dedicated structures and skilled professionals necessary for managing intellectual property, business incubation, and community partnerships (UNESCO, 2015; ATA, 2020). Furthermore, stakeholders such as farmers, industries, and local governments are inadequately involved in setting research agendas, which are largely determined internally by academic staff, leading to supply-driven rather than demand-driven approaches (Tessema, 2020). Financial constraints also pose a major challenge, with limited national funding allocated to

support community-driven applied research and technology transfer initiatives within UAS (MoST, 2012). Lastly, the monitoring and evaluation mechanisms currently in place are weak, focusing primarily on academic outputs rather than assessing the economic or social impact of research and technology transfer efforts (Lakew, 2021).

3. Opportunities

The pilot projects highlight positive aspects and benefits of demand driven applied research and technology transfer in UASs in Ethiopia. These benefits include:

Table 1: Opportunities to implement demand driven applied research and technology/knowledge transfer

Opportunities	**Descriptions**	**Supported by**
Alignment with National Development Priorities	Addressing real-world challenges in agriculture, health, education, manufacturing, and energy supports Ethiopia's growth and homegrown economic reforms	Ayele et al., (2018); FAO, (2019).
Enhanced Academic Relevance & Impact	Applied research bridges the gap between academia and socio-economic realities, making academic work more solution-oriented	Doss et al., (2003)
Improved Community Engagement & Trust	Involving local communities, farmers, and SMEs in research fosters knowledge co-creation and locally adapted innovations	MoE (2021)
Stronger University-Industry Linkages	Joint problem-solving, internships, and commercialization efforts position UAS as regional innovation hubs	MoSHE (2020)
Capacity Building & Skill Development	Practical exposure for students and staff enhances entrepreneurial thinking and lifelong learning	Lakew & Haile (2021)
Efficient Resource Utilization	Demand-driven research reduces duplication by targeting high-priority needs	Gebreeyesus (2021)
Boosted Sectoral Competitiveness	Strengthens Ethiopia's innovation profile and adaptability in higher education	ATA (2020); MoA (2021)
Job-Creating Innovations	Support for startups, incubation centers, and IP protection can spur youth employment	African Development Bank, (2022)
Localized Problem-Solving	Applied research on drought-resistant crops, water management, and renewable energy benefits rural communities	FAO (2020)
Accelerated Technology Transfer	UASs can serve as hubs for disseminating scalable technologies to SMEs and farmers	World Bank (2019)
Evidence-Based Policymaking	Context-specific research informs national strategies on climate resilience, health, and infrastructure	UNESCO (2021)
Human Capital Development	Demand-driven education aligns with Ethiopia's Ten-Year Development Plan for industrialization	MoSHE (2020)

4. Challenges

Implementing demand-driven applied research and technology transfer in Ethiopian Universities of Applied Sciences (UASs) faces several critical challenges that hinder its effectiveness and impact. These challenges comprise:

Table 2: Challenges to implement demand driven research and technology/knowledge transfer

Challenge	**Descriptions**	**Supported by**
Institutional and structural barriers	Weak university-industry linkages, bureaucratic governance, rigid policies, underdeveloped tech transfer systems, and poor institutional coordination hinder innovation and practical research impact.	Ayele et al. (2018); Molla (2017)
Financial & Resource Constraints	Inadequate funding for applied research and innovation, fragmented and unsustainable financing mechanisms and limited access to modern research equipment and digital tools	Spielman et al. (2011); Teshome (2019)
Capacity & Expertise Gaps	Insufficient practical experience among academic staff, lack of specialized training in demand-driven research and technology transfer, low institutional capacity for effective knowledge dissemination	Teferra & Altbach (2004)
Demand Articulation & Stakeholder Engagement Issues	Poor industry and community demand articulation mechanisms, limited farmer/researcher engagement in setting research agendas, research outputs often misaligned with real-world needs and low literacy levels and gender barriers limiting participation in technology adoption	Kassa & Tsegaye (2020)
Monitoring & Evaluation Weaknesses	Inadequate systems to track research outcomes and impacts, lack of accountability and learning from past initiatives and minimal policy coherence in research funding and implementation	ASTU (2023)
Social & Technological Barriers	Limited farmer participation in research processes, gender disparities affecting technology adoption and inadequate digital infrastructure for research dissemination	Doss et al. (2003); Beshah et al. (2013); Gebreeyesus (2021)

5. Key Policy Recommendations

Table 3 provides practical policy recommendations to enhance Ethiopian Applied Sciences Universities' focus on demand driven applied research and technology or knowledge transfer by identifying the most critical stakeholder responsibilities. Every evidence based recommendations, expected benefits and potential limitations for effective policy implementation and development.

Table 3: Policy recommendations with key actions, pros and cons

No	Key Action	Pros	Cons	Stakeholder
1.	Institutionalize demand driven ARTT frameworks aligned with local/national needs	Better aligned with real world problems Stronger impact on local development: Improved relevance of academic output	Requires reliable mechanisms to assess actual demand Risk of short term focus over long-term scientific exploration	UASs, MoE, local governments, community organizations, private sector
2.	Establish innovation hubs and knowledge transfer offices within UASs	Facilitates commercialization of research by Bridging gaps between academia and industry by establishing entrepreneurship Center and job creation opportunities	Costly to set up and maintain success dependent on private sector interest and collaboration	UASs, MoSTI, local industries, start-ups, NGOs
3.	Promote Public-Private-Academic Partnerships (PPAPs)	Encourages co-creation of knowledge and solutions Enhances resource sharing and sustainability Builds trust and shared accountability	Potential conflict of interest Requires clear MoUs and coordination frameworks	UASs, private sector, government agencies, civil society
4.	Incentivize researchers to focus on demand driven projects	Motivates researchers to work on applicable solutions Encourages interdisciplinary collaboration Builds a results-oriented research culture	Risk of neglecting fundamental/theoretical research Grant dependency could skew research priorities	UASs academic staff, MoE, donors, research councils
5.	Embed community engagement in the research cycle	Promotes inclusiveness and local ownership Improves adoption of technologies Encourages indigenous knowledge integration	Community expectations may be difficult to manage Time consuming engagement processes	Local communities, UASs, extension workers, NGOs
6.	Develop national/regional research priority setting platforms	Ensures strategic alignment and avoids duplication Enhances transparency and accountability Better allocation of limited resources	Risk of politicization of priority setting May limit academic freedom	MoE, MoSTI, UASs, regional bureaus, sector ministries
7.	Strengthen extension and advisory	Accelerates uptake of innovations	Requires investment in capacity	UASs, Ministry of

	services linked to UASs	Increases the practical utility of UAS outputs Builds trust with end-users	building Extension services can become overstretched or under resourced	Agriculture, rural development offices, cooperatives
8.	Use digital platforms for wider dissemination and feedback	Cost-effective and broad reach Encourages real-time feedback from users Supports knowledge retention and scaling	Digital divide may exclude remote or underserved communities Requires ICT infrastructure and digital literacy	UASs ICT units, MoE, telecom providers, users (farmers, SMEs, youth)
9.	Regular monitoring, evaluation, and learning of knowledge transfer activities	Improves accountability and learning Informs future policy and practice Enables adaptive programming	May be seen as a bureaucratic burden Requires skilled personnel and reliable data	MoSTI, donors, implementing partners
10.	Support mobility of researchers between academia and industry/public sector	Enhances skill transfer and collaboration Builds practical experience and networks Encourages innovation-driven mindsets	- Potential brain drain from academia- May require major structural adjustments (e.g., contracts, incentives)	UASs, public institutions, private companies, HR departments

6. Conclusion

Ethiopia's Universities of Applied Sciences (UAS) must adopt demand-driven research focused on real-world, community-centered problems to maximize practical impact, requiring the establishment of innovation hubs; such as entrepreneurship centers and knowledge transfer offices to bridge academia and industry while fostering stronger collaboration among universities, industries, government, and communities. However, challenges like unclear policy frameworks, limited funding, weak monitoring systems, and insufficient researcher incentives, infrastructure, and training hinder progress despite the potential benefits, including job creation, localized solutions, technology transfer, improved education relevance, and national development. To address these gaps, stakeholders recommend institutionalizing demand-driven research policies, investing in innovation hubs and researcher incentives, strengthening university-industry-community linkages, aligning research with local development needs, and ensuring adequate funding, digital platforms, and robust monitoring systems.

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Creating career paths for professors (teachers and researchers) with experience in applied research and the professional field

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Executive Summary

Globally, higher education sector is increasingly called upon to demonstrate accountability, quality, and alignment with both national and international development priorities. In Ethiopia, Universities of Applied Sciences (UASs) face a critical challenge in establishing equitable and relevant career progression systems for academic staff. A key policy concern is the misalignment between the missions of UASs, focused on practical, application-based learning, and the traditional academic promotion systems. Current guidelines inadequately recognize faculty contributions to teaching, research, and professional engagement, which limit academic staff motivation to accomplish with their full potential. Addressing this gap through a revised policy framework is essential for enhancing faculty development and institutional performance. To inform these adjustments, the proposed policy stems from international best practices, particularly from Osnabrück UAS in Germany and Savonia UAS in Finland. Osnabrück's "Tandem Professorship" model integrates academic research with industry experience, ensuring that candidates meet both academic and professional criteria. Similarly, Savonia UAS implements a dual-track system, enabling professionals from industry to teach while completing mandatory pedagogical training. These cases emphasize the importance of creating promotion systems that bridge academia and professional practice, reinforcing the relevance and impact of UASs in applied research and workforce development. Accordingly, the proposed policy adjustment in Ethiopia seeks to achieve three main goals: aligning UASs' missions with professional promotion criteria; enhancing the quality of education and research through a capable and motivated academic workforce; and strengthening university-industry linkages to reflect real-world standards. The adjustment calls for three core areas: setting minimum requirements for professional engagement, refining indicators and promotion points, and outlining implementation stages. Through this comprehensive and globally informed policy shift, Ethiopian UASs can establish a dynamic and practical promotion framework that contributes meaningfully to national development goals.

1. Introduction

The global shift toward more accountable, practice-oriented higher education systems has placed increased emphasis on aligning academic structures with real-world professional standards (DAAD, 2022; Finnish Ministry of Education and Culture, 2021). In Ethiopia, the Higher Education Proclamation (FDRE, 2019) and the Education Sector Development Plan (MoE, 2020) highlight the need for reforming university systems, especially within Universities of Applied Sciences (UASs), to ensure quality, equity, and relevance. However, the absence of a tailored career progression and promotion framework has limited the ability of UASs to attract, retain,

and motivate academic staff whose work blends teaching, research, and professional practice. Drawing from successful models such as the Tandem Professorship at Osnabrück UAS in Germany and the industry-based track at Savonia UAS in Finland, Ethiopia can reimagine its academic promotion system to reflect the unique mission of UASs. Therefore, this policy recommendation needs to establish a vigorous and contextually appropriate promotion framework that aligns with UASs missions, promotes professional engagement, and supports national development goals.

2. Policy problem statement

UASs in Ethiopia face a significant challenge in promoting academic staff through a system that reflects their unique mission of applied teaching, practice-based research, and industry collaboration. The current promotion framework largely modeled on traditional university structures, emphasizing theoretical research outputs and failing to adequately account for professional engagement, practical experience, and contributions to industry-relevant innovation. This misalignment has created barriers to equitable career progression for faculty, particularly those engaged in application-oriented activities central to UASs mandates. Without a tailored policy that redefines promotion criteria to align with the distinct goals of UASs, academic motivation, institutional relevance, and the quality of applied education and research are likely to remain inhibited. Therefore, a national policy adjustment is urgently needed to introduce a context-specific, practice-oriented promotion system that supports the professional growth of academic staff and enhances the developmental role of UASs in Ethiopia.

3. Opportunities of career progression adjustment for UASs

Table 1 highlights the opportunities that directly contribute to shaping a more structured and impactful career progression and promotion framework within Ethiopian UASs.

Table 1: Opportunities of career progression adjustments

Opportunity	Description
Alignment with UAS mission	Integrating the core mission of UASs (applied learning, practical research, and community engagement) into the promotion framework makes faculty career progression becomes more relevant to institutional goals, ensuring staff contributions are recognized and valued.
Integration of global best practices	Adopting international best practices, such as Osnabrück UAS's tandem professorship model and Savonia UAS's industry-based career track, informs the development of a promotion framework that values both academic and professional

	experience, providing a pathway for staff from academia and industry to progress.
Enhancement of university-industry collaboration	Embedding university-industry collaboration into the promotion criteria ensures faculty members with industry experience are recognized, motivating them to engage in applied research and teaching, and aligning career progression with real-world professional standards.
Professional recognition and motivation	Recognizing professional experience and contributions within the promotion system not only motivates academic staff but also supports career advancement for those who engage in industry and practical applications, improving overall academic performance.
Support for national development goals	Integrating national development priorities (such as, industrialization, innovation, workforce development) into the promotion system ensures that career progression pathways are aligned with Ethiopia's strategic objectives, creating a direct link between faculty contributions and national development.
Establishment of clear career pathways	Defining clear promotion criteria with minimum requirements, indicators, and stages creates a transparent and equitable framework for career progression, enabling faculty to navigate their professional growth with clear benchmarks and milestones.
Strengthening applied research culture	Encouraging applied research through a promotion framework that rewards industry collaboration and third-party funded projects ensures that, faculty are incentivized to contribute to innovation and practical problem-solving, linking career progress to the impact and relevance of their work.

4. Challenges of career progression adjustment for UASs

Table 2 indicates challenges that must be carefully considered in the policy adjustment and implementation to ensure that the proposed career progression and promotion framework is both effective and fair.

Table 2: Challenges of career progression adjustments

Challenge	Description
Limited industry-academic collaboration	There is insufficient collaboration between UASs and the professional world, which limits the integration of industry experience into the promotion process. This gap affects the practical relevance of the promotion system and reduces faculty to engage with real-world challenges, impeding career growth.
Resistance to change	The adjustment of promotion guidelines may face resistance from both faculty and administrators, particularly in a system accustomed to traditional academic frameworks, require effective change management strategies.
Insufficient professional development support	Faculty may lack adequate opportunities for professional development, such as industry training, mentorship, or teaching qualifications. Without support structures to help faculty meet evolving promotion criteria, the career progression system may be unattainable.
Inconsistent application of promotion criteria	Even with clearer guidelines, there may be inconsistencies in how promotion criteria are applied across departments or faculty members, leading to perceptions of favoritism or inequity.

5. Policy Recommendations

Recognizing the potential benefits and associated challenges, the experience on career progression outcomes can serve as valuable inputs for policy adjustment, emphasizing the following key recommendations (Table 3).

Table 3: Policy recommendations to improve career progression for UASs

Policy adjustment	Key Action	Pros	Cons	Stakeholders
Align promotion criteria with the corresponding UAS mission	Draft nationwide promotion directive to emphasize practical experience, industry collaboration, applied research, and teaching excellence	Enhances relevance of academic roles; motivates staff to engage in applied research and professional practice; strengthens industry linkage	May face resistance from faculty accustomed to traditional research-focused promotion; implementation requires policy overhaul and capacity building	MoE, industry partners, Development partners
Incorporate industry-based achievements into evaluation metrics	Formalize criteria to reward patents, consultancies, industry projects, and community impact	Encourages real-world engagement; fosters innovation and entrepreneurship; aligns with UAS mission	Difficult to standardize evaluation of diverse achievements; industry partnerships may not be equally accessible to all	MoE, Industry partners, UASs
Strengthen alumni-industry-staff pipeline	Develop a structured alumni tracking and engagement system to identify potential future staff with professional experience	Builds a pool of qualified professionals; enhances recruitment of staff with practical experience; promotes mentorship	Requires long-term investment; risk of limited alumni interest or mobility	UASs
Establish mentorship and professional development programs	Institutionalize mentorship and short-term industry attachments to prepare staff for promotion readiness	Builds staff competencies; enhances institutional reputation; supports equitable career growth	Requires resource allocation; time away from teaching duties	MoE, USs, industry mentors, development partners

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Incorporating part-time lecturers from practice in the teaching and learning process and up skilling existing academic staff of Ethiopian Universities of Applied Sciences (UASs)

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Executive Summary

Globally, there is a growing agreement on the need to bridge the gap between higher education and industry demands, especially in universities of applied sciences. Although countries have made progress in fostering university-industry linkages, significant gaps remain ineffectively integrating real-world experience into teaching and learning processes. In Ethiopia, these challenges are exacerbated by limited industry involvement in curriculum design, a shortage of practical skill-building opportunities, and underdeveloped frameworks for leveraging part-time industry experts in academia. As a result, graduates often lack the hands-on experience and market-aligned competencies required for the workforce. This policy brief draws on practical experiences from FAITH two pilot projects at Kotebe University of Education (KUE) and Wolaita Sodo University (WSU), which explored innovative approaches to integrating part-time lecturers from industry and up-skilling academic staff. The initiatives aimed to enhance the relevance and quality of education in Universities of Applied Sciences (UASs) through team teaching, co-supervision, and practical exposure. These pilots revealed both the potential of such collaborations and the systemic challenges faced, such as lack of formal partnerships, logistical barriers, limited pedagogical training for part-time lecturers, and institutional capacity constraints. To address these gaps, this policy brief presents a set of evidence-based policy recommendations aimed at formalizing and scaling the integration of part-time industry professionals and structured upskilling of academic staff in Ethiopian UASs. It advocates for the development of clear institutional frameworks, formal industry-university agreements, pedagogical training for part-time lecturers, and mechanisms for sustainable funding and monitoring. These measures are essential to creating a practice-oriented, responsive, and high-quality education system that aligns with Ethiopia's industrialization and job creation goals.

1. Introduction

Universities of Applied Sciences (UASs) are established to bridge the gap between academic theory and practical application by equipping students with skills that are directly aligned with labor market demands (OECD, 2021). Globally, they serve as engines of innovation and employability through close partnerships with industries. However, in the Ethiopian context, there is a notable lack of collaboration between UASs and industry. For decades, both sectors maintained a closed-door approach, limiting opportunities for cooperation and mutual gain (Hailu, 2021). This disconnect has contributed to a persistent mismatch between the competencies acquired by graduates and the skills required by employers, ultimately affecting

job readiness and productivity (World Bank, 2019; UNESCO, 2020). The joint instruction by academic staff and industry practitioners has emerged as a potential strategy to strengthen university-industry collaboration and ensure more effective course design, delivery, and evaluation (Moges, 2020).

In response to these systemic issues, the Ethiopian government introduced a new policy framework, the Higher Education Technical and Vocational Training and Research Institutions and Industry Linkage (HETRIIL) Proclamation No. 1298/2023, aimed at institutionalizing university-industry cooperation (MoE, 2023). This proclamation sets out clear responsibilities for both academic and industrial partners to engage in sustained collaboration. Nevertheless, its implementation has been uneven, with limited operational guidance and weak enforcement mechanisms. Without active facilitation and incentives, industries remain uncertain to participate meaningfully in educational processes (Teshome, 2022). To address these gaps, initiatives such as those piloted at Kotebe University of Education and Wolaita Sodo University demonstrate the potential of structured part-time industry teaching and academic staff upskilling. These models highlight practical pathways for strengthening applied education, fostering mutual value creation, and ultimately enhancing the relevance and quality of higher education in Ethiopia.

2. Policy Problem

Despite the Ethiopian government's recognition of the need for stronger university-industry collaboration as evident in the HETRIIL Proclamation No. 1298/2023, UASs continue to face significant challenges in operationalizing this mandate. A major barrier lies in the absence of clear institutional guidelines for integrating part-time lecturers from industry into teaching and learning processes. This gap is compounded by the limited pedagogical capacity of industry professionals, insufficient financial and administrative frameworks for recruitment, and weak monitoring mechanisms. Consequently, academic programs remain predominantly theoretical, disconnected from real-world industry practices, and poorly aligned with labor market needs. Without targeted efforts to formalize part-time industry teaching and enhance the capacity of academic staff, Ethiopian UASs will remain unable to fulfill their fundamental goal of preparing graduates who are equipped with the practical skills demanded by the workforce.

3. Opportunity

The integration of part-time industry lecturers and collaborative teaching models presents a timely and strategic opportunity for Ethiopian UASs to enhance the relevance, coherence, and quality of their academic programs.

Table 1: Opportunities of integrating UASs with part-time industry lecturers

Opportunity	Description
HETRIIL Proclamation (No. 1298/2023)	Provides a strong legal foundation to institutionalize collaboration between UASs and industry, including team teaching, joint training, and co-designed curricula.
Growing industry demand for skilled graduates	Increasing need for practically trained professionals creates incentives for industries to invest in university partnerships and capacity building.
Availability of experienced industry professionals	Ethiopia hosts a wide pool of skilled professionals in various sectors who can contribute to teaching and mentorship if given formal roles and guidance.
Government focus on employability and relevance	National priorities emphasize linking education with employment, creating momentum for policies that bridge academic-industry divides.
International models and partnerships	Global practices and existing partnerships (e.g., with German UASs or other vocational systems) offer replicable, contextualized frameworks for team teaching.
ICT and blended learning opportunities	Digital tools make it easier to involve industry experts remotely, provide modular training for staff, and record knowledge exchanges for wider institutional use.
Socializing students into professional practice	Involving industry professionals in teaching helps students gain real-world exposure, understand workplace expectations, and prepare for smooth transitions to jobs.
Building collegial relationships	Encourages professional relationships between university instructors and industry experts, fostering mutual growth and trust.

4. Challenges

Several challenges may hinder the implementation of part-time industry teaching at the (UAS). Table 2 indicates key challenges that should be considered during implementation.

Table 2: Challenges that hinder the implementation of part-time industry teaching

Challenges	Descriptions
Loose link between UAS and the industry	The University-industry linkage in our case is almost at its infantile stage. Much is expected to create and strengthen the partnership between the two.
Institutional culture	Hand-in-hand to the wider gap between UAS and the world of work is the fact that our institutional culture is not as such well developed to invite the part-time lecturers, except a few cases, to co-work with the

	university professors in integrating the theoretical knowledge to the practices in the world of work.
Absence of well-equipped laboratory in university.	Institutional setting for team teaching is not suitable to implement it easily.
Lack of teaching experience of industry professional	Industry personnel lack pedagogical skills that hinders theirs efforts to facilitate students learning
Financial and logistic constraints	Inadequate logistics to incorporate teaching learning process between university lecturer and industry expert.
Schedule	University program implementation schedule may not be suitable for industry experts.
Lack of proper incentives	Expectation from industry about better payment from university but the low payment for industry professionals).
Curriculum rigidity	The existing curriculum by itself is not suitable to implement team teaching or it is rigid curriculum where and when industry experts to take part in teaching learning process of UAS is not clearly stated.

5. Policy Recommendations

To effectively enhance the quality and relevance of education in Ethiopia's UASs, it is recommended that the Ministry of Education, in collaboration with relevant stakeholders, implement a national framework that supports the structured involvement of part-time industry lecturers and up-skilling of academic staff (Table 3).

Table 3: Industry part-time teaching policy options

Policy Options	Key Actions	Pros	Cons	Stakeholders
Develop national implementation guideline	Develop clear guidelines incorporating part-time industry lecturers into academic programs	Provides standardization; supports consistent application across UASs	Requires strong coordination and policy coherence	Ministry of Education, UASs, Industries
Strengthen partnership between UASs and industries	Universities-Industry Linkage (UIL) offices shall coordinate joint teaching and practical exposure	Enhances relevance and quality of education; bridges theory-practice gap	May face resistance from industries; sustainability may be a challenge	UASs, Industries, UIL Offices
Develop database system	Create a centralized contact platform linking industries with specific teaching specialties	Improves communication and mobilization; streamlines recruitment	Requires technical capacity and regular updates	UASs
Develop incentive mechanism for industry personnel	Set payment standards, offer scholarships or benefits for industry professionals and families	Attracts qualified professionals from industry; encourages long-term engagement	Financially demanding; may require special budget allocations	MoE, MoF, UASs, Industries

Develop flexible curricula	Create or revise curricula jointly with industry; integrate industry needs and workplace skills	Encourages adaptability and alignment with labor market trends	Time-consuming process; may disrupt existing academic structures	UASs, Curriculum Development Teams, Industries
Develop pedagogical training	Develop a curriculum to offer short-term training in teaching methodology for industry professionals	Enhances teaching effectiveness and student engagement	Requires continuous funding and scheduling flexibility	MoE, UASs, Teacher Training Institutes

6. Conclusion

Ethiopia faces a critical skills gap, with higher education institutions failing to align their educational offerings with industry needs, leading to declining graduate quality. While the Higher Education Technical and Vocational Training and Research Institutions and Industry Linkage (HETRIIL) Proclamation (No. 1298/2023) provides a strong legislative framework to foster academia-industry collaboration, its implementation has been hindered by unclear guidelines and weak enforcement. For meaningful progress, both universities and industries must fully recognize the mutual benefits of partnership: enhancing education quality, workforce readiness, and innovation. Stakeholders should take decisive action by clarifying HETRIIL's operational guidelines, strengthening accountability mechanisms, and fostering a culture of sustained collaboration to bridge the gap between education and employment.

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Transforming Ethiopian Applied Science Universities: Integrating SDGs for a Sustainable Future

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Executive Summary

The global push to achieve the Sustainable Development Goals (SDGs) by 2030 has placed higher education institutions (HEIs) at the forefront of transformative change. Ethiopia, a country facing significant development challenges such as environmental degradation, gender inequalities, and poverty, is looking to its Universities of Applied Sciences (UASs) to address these issues through practical, application-based education. However, integrating the SDGs into the curricula, research, and community engagement activities of UASs remains a challenge that requires targeted efforts and institutional support. This policy brief emanates from a pilot study conducted at Jigjiga University and Wolaita Sodo University, two institutions that have made initial attempts in aligning their educational practices with the SDGs. The study provides valuable insights into the successes and challenges these universities have faced in integrating sustainability into their programs. It also highlights the potential for UASs to be powerful agents of change by tailoring their educational offerings to directly address national and global development priorities. Based on the findings, the policy brief outlines strategic recommendations for enhancing the role of Ethiopian UASs in SDG implementation. Key proposals include aligning curricula with SDG-related themes, establishing dedicated sustainability centers for research and outreach, strengthening partnerships with industries, and fostering interdisciplinary research. These recommendations are designed to guide Ethiopian UASs in becoming key contributors to the country's sustainable development goals, demonstrating the potential of higher education to drive meaningful change at both local and national levels.

1. Introduction

The adoption of the United Nations 2030 Agenda for Sustainable Development in 2015 marked a global commitment to building a more inclusive, equitable, and sustainable world through the achievement of 17 Sustainable Development Goals (SDGs) (United Nations, 2015). These goals offer a convergent strategy to address global challenges, emphasizing the need for integrated solutions. Universities of Applied Sciences (UASs) are mandated to contribute to these solutions, with their core missions of teaching, research, innovation, and community service providing a platform for translating SDGs into practical, localized actions (Hunde et al., 2023). In Ethiopia, the urgency of integrating SDGs into UASs is even more pronounced, given the country's challenges with youth unemployment, environmental degradation, and inadequate alignment between education and labor market needs (Zewdie & Dibaba, 2022; Moges et al., 2023).

Despite national and international commitments to sustainable development, the operationalization of the SDGs within Ethiopia's higher education system remains limited, with Ethiopian UASs yet to fully align their curricula, research, and community programs with SDG objectives (Federal Democratic Republic of Ethiopia, 2016). This policy brief emphasizes the barriers and opportunities for SDG integration in these institutions and providing actionable recommendations to enhance their role in advancing sustainability.

2. Policy Problem Statement

The integration of the SDGs into Ethiopian UASs remains limited, hindering their potential to address the nation's pressing challenges. A pilot study conducted at Jigjiga University and Wolaita Sodo University revealed significant barriers, including a lack of institutional frameworks, inadequate interfaculty collaboration, and insufficient alignment between academic programs, research agendas, and the SDGs. These challenges contribute to the misalignment between education outputs and labor market demands, exacerbating graduate unemployment. Therefore, a targeted policy intervention is crucial for addressing the challenges and unlocking the full potential of UASs in advancing sustainable development in Ethiopia.

3. Opportunities of integrating SDGs in UASs

The opportunities (Table 1) provide ways for UASs to contribute significantly to Ethiopia's sustainable development agenda and improve the alignment of higher education with the SDGs.

Table 1: SDGs integration opportunities with associated descriptions

Opportunity	Description
Curriculum alignment with SDGs	Opportunities to revise and align university curricula with the SDGs to foster a more sustainable, multidisciplinary, and practical approach to education.
Inter-faculty collaboration	Encouraging collaboration across departments to integrate SDG-focused research, teaching, and community engagement, fostering cross-disciplinary solutions.
Research innovation for sustainable development	UASs can serve as hubs for research aimed at addressing local and global sustainability challenges, providing innovative solutions to Ethiopia's ecological and social issues.
Increased industry partnerships	SDG integration can attract partnerships with international organizations, NGOs, and the private sector, creating funding opportunities and practical learning experiences.
Student empowerment for	Engaging students with SDG-related projects empowers them to become

SDG leadership	leaders of sustainable change, addressing challenges like unemployment and social inequality.
Community engagement and outreach	Universities can leverage their outreach programs to engage local communities in SDG initiatives, promoting environmental stewardship and social development.
International recognition and collaboration	Aligning with the SDGs can enhance the global standing of Ethiopian UASs, enabling collaboration with international universities and organizations.

4. Challenges of SDGs integration in UASs

The challenges (Table 2) indicate the institutional, structural, and operational barriers that need to be addressed to unlock the transformative potential of UASs in contributing to Ethiopia's sustainable development.

Table 2: Challenges on SDGs integration with associated descriptions

Challenge	Description
Limited institutional awareness of SDGs	Many academic and administrative staff lack sufficient knowledge about the SDGs, their relevance, and how to integrate them into university functions.
Absence of clear national guidelines	There are no specific national frameworks or operational guidelines directing UASs on how to implement SDG-focused activities in curriculum, research, and outreach.
Fragmented coordination structures	Lack of coordination among university departments, and between universities and external stakeholders, limits coherent SDG implementation.
Inadequate funding and resource allocation	Financial limitations hinder the development of SDG-aligned programs, interdisciplinary research, and community-based sustainability projects.
Low integration in curriculum and research	Most programs remain discipline-specific, with limited incorporation of sustainability concepts and cross-sectoral research linked to the SDGs.
Weak university–industry–community linkages	UASs have limited engagement with industries and communities, reducing the practical application of SDG initiatives and local impact.
Lack of monitoring and evaluation mechanisms	Universities lack tools and systems to track SDG-related performance, assess outcomes, or inform strategic planning and improvement.

5. Policy Recommendations

The recommendations (Table 3) offer practical policy options based on insights from the pilot study and associated experiences. They aim to integrate the SDGs into the core functions of Ethiopian UASs: teaching, research, governance, and community service.

Table 3: SDG integration policy options for Ethiopian UASs

Policy Option	Key Action	Pros	Cons	Stakeholders
Develop a national SDG integration	Issue a framework aligning SDGs with	Provides national direction; ensures	May require significant time and	MoE along with Development

framework	UASs functions	consistency across UASs	resources to develop and disseminate	Partners
Establish SDG coordination units in UASs	Create dedicated offices or focal persons responsible for SDG mainstreaming	Enhances coordination, monitoring, and institutional ownership	Could face resistance or resource constraints from institutions	MoE, UASs
Revise and harmonize curriculum to include SDG content	Embed interdisciplinary sustainability and SDG content into programs	Builds student competencies in real-world sustainability issues	Curriculum revision can be lengthy and requires capacity building	MoE, UASs
Promote SDG-aligned research and innovation	Allocate funding and recognition for SDG-focused interdisciplinary research	Encourages innovation and relevance to national development needs	Risk of overburdening faculty without adequate incentives	UASs, Granting Agencies,
Strengthen university–community–industry linkage	Facilitate platforms for UASs collaboration with local actors on SDG projects	Enhances real-world impact, relevance, and employability of graduates	May require new partnership models and outreach structures	UASs, Local Governments, Industries, NGOs
Implement SDG monitoring and evaluation systems	Introduce M&E tools for tracking SDG-related teaching, research, and service	Supports evidence-based planning and continuous improvement	M&E systems require technical expertise and initial investment	MoE, UASs, Development Partners

6. Conclusion

Integrating the SDGs into the Ethiopian UASs presents a transformative opportunity to align higher education with national and global development priorities. The pilot study conducted at Jigjiga and Wolaita Sodo Universities reveals both institutional potential and existing gaps in SDG integration. With the right policy interventions including clear guidelines, curriculum reform, strengthened partnerships, and vigorous monitoring mechanisms, UASs can become agents of sustainable innovation, employment, and community impact. Urgent and coordinated action from government, academia, and development partners is essential to realize this vision and ensure that UASs contribute meaningfully to Ethiopia's sustainable future.

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