

ORIGINAL RESEARCH

Decolonizing skills formation and TVET in the Global South: A re-exploration of frameworks, governance, and digital futures

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Abstract

This paper examines the past, present, and future of higher and technical and vocational education and training (TVET) in the Global South within the context of the global organization of knowledge. It argues that global universities have not yet completely relinquished colonial paradigms, as evidenced by persistent neoliberal approaches and a hierarchical knowledge system favoring the Global North. These dynamics hinder the advancement of Southern universities. Grounded in decolonial and postcolonial theories, this study proposes a four-dimensional space framework—knowing, doing, being, and feeling—to reinterpret the nexus between knowledge, identity, and justice in education. A qualitative documentary analysis reveals how institutions in the Global South are reclaiming epistemic sovereignty, strengthening regional and South-South cooperation, and leveraging digital transformation to enhance access, equity, and societal relevance. The findings indicate that Southern universities and TVET institutions are emerging as important players in global knowledge production, cultural renewal, and social innovation, despite challenges such as massification, uneven funding, and digital divides. The Global South is thus no longer a passive recipient of imported frameworks but a key site of intellectual creativity, multiple ways of knowing, and transformative educational futures.

Keywords

Global South, higher education, technical and vocational education and training, decolonization, educational sovereignty, regional cooperation, digital transformation

INTRODUCTION

Over the past few decades, the education system across the world has undergone many changes resulting from worldwide economic, technological, and cultural shifts. As the global landscape transforms, the Global South is seeing an expansion of learning opportunities alongside deepening structural inequalities, especially in skills formation and technical and vocational education and training (TVET). The legacy of colonial rule and subsequent neoliberal reforms has shaped Southern TVET systems, often creating

a reliance on foreign models at the cost of local relevance. Nevertheless, these systems are increasingly becoming laboratories of innovation in digital learning, regional cooperation, and decolonial pedagogy, potentially changing the relationship between knowledge and work.

This paper proposes a four-dimensional framework—knowing, doing, being, and feeling—to re-examine the processes of decolonizing skill formation in the Global South. Within this framework, "knowing" refers to a critical awareness of global inequalities in technical education;

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"doing" emphasizes institutional autonomy and work-based learning; "being" emphasizes identity, ethics, and professional purpose; and "feeling" highlights solidarity, social justice, and the affective dimensions of skill development.

This paper aims to understand the rationale behind Global South countries' reclamation of epistemic sovereignty in vocational and technical education. It explores frameworks that can ensure equitable access to digital training and vocational education. Moreover, it investigates the ways in which regional cooperation can promote the mutual recognition of qualifications. By seeking answers to these questions, this paper contributes to an emerging discourse that reconceives TVET not so much as training but as a transformative, culturally located, and technologically savvy system that can empower Southern societies and rebalance global knowledge hierarchies.

RESEARCH BACKGROUND

Progress and skill development in the Global South: Changing trends in a fragmented world

The Global South is not merely a geographical designation but a political and economic epistemic stance emerging from shared histories of colonial domination, economic dependence, and knowledge marginalization. The term "Global South" emerged during the Cold War period as a successor to the term "Third World". It provides a critical lens for evaluating how unequal development is perpetuated through knowledge, technology, and skills. The discourse on inequality has evolved from focusing on economic disparity during the post-Cold War and globalization periods to addressing epistemic and technical inequalities affecting the building, value, and transmission of skills. Globally, a human- and technology-centric approach to training and education is emerging. In this context, TVET systems in the Global South present a dual challenge and opportunity: They serve as crucial levers for employment, industrial productivity, and innovation while simultaneously being constrained by colonial legacies, fragmented governance, and weak technological integration. Decolonial theorists such as Quijano (2007) and Mignolo (2009) critique the pervasive "coloniality of power" and advocate for "epistemic disobedience" against Eurocentric models, which remain dominant in education and training systems. Worldwide, many norms and standards, including those for global TVET competitiveness, are international in scope but often disregard local knowledge systems, community-driven skills, and Indigenous pedagogies. Connell (2007) refers to "Southern theory" and insists on "thinking out" from distinctive, context-bound, locally embedded approaches to knowledge and skills formation reflecting the realities of Southern economies and societies.

TVET institutions are not merely training centers for the labor market; they are also sites for negotiating and reclaiming epistemic, cultural, and technological autonomy. However, across much of the Global South, TVET remains underfunded and undervalued, and is structurally disconnected from both industry and Indigenous communities. This disconnection complicates efforts to align decolonizing educational agendas with the skill demands of globalized industries, highlighting a fundamental tension between emancipatory curricular aims and labor market structures that often operate within neo-colonial logics. Consequently, rethinking the historical foundations and theoretical significance of skills formation and vocational education in developing countries has become a crucial frontier of educational research. This involves a shift from the reactive adoption of Western models to the decolonization of governance structures, the integration of digital technologies, and the establishment of regional cooperation frameworks for the recognition of qualifications, mobility, and lifelong learning across borders.

Differences in the development of skills and TVET systems

Educational systems vary significantly worldwide. While some regions possess advanced technology and robust educational institutions, the Global South often suffers from systemic weaknesses. These imbalances are not simply a "development gap" but reflect colonial legacies, neoliberal globalization, and the inequitable global division of knowledge and labor. In many parts of the Global South, TVET institutions remain marginalized within national education hierarchies, often perceived as inferior pathways compared to academic higher education. However, they are the principal means for skills formation, social mobility, and industrial development. Altbach (2004) argued that global education structures continue to privilege Northern epistemologies, languages, and institutional forms, particularly those that are English-language-based and Western-accredited. As a result, Southern institutions are under-represented in global rankings, qualification frameworks, and research visibility. These inequalities were amplified by the neoliberal wave of the 1980s and 1990s. A number of Southern governments adopted privatization and market-oriented reforms under the direction of international financial institutions, which recast education as an individual investment rather than as a public good (Shahjahan, 2016; Tikly, 2004). These reforms weakened state responsibility, fragmented funding mechanisms, and restricted equitable access to quality technical education. As a result, TVET institutions faced pressure to "internationalize" to remain competitive while simultaneously struggling to maintain local relevance, cultural integrity, and community-based learning traditions—a tension that

continues to characterize the field today.

Newer frameworks, such as UNESCO's 2021 report on a new social contract for education, call for reimagining learning around social justice, ecological sustainability, and cultural pluralism. For the Global South, this presents both a challenge and an opportunity: To move away from imported, ineffective models toward new, locally rooted, digitally enabled, and socially inclusive frameworks that reflect Indigenous values and regional development priorities.

Therefore, the future of TVET in the Global South depends on striking the right balance between global competitiveness and epistemic sovereignty. It is essential to develop skills that are globally employable yet rooted in locally meaningful economic, cultural, and community contexts. This transformative vision requires governance models that connect industry, regional qualification frameworks, and digital platforms to ensure that skills formation serves as a vehicle for both economic advancement and decolonial justice.

Problem statement

The Global South's development of TVET systems is, first and foremost, no longer simply about institutional capacity or labor market alignment in a fast-changing educational environment. At its core, it entails struggles for epistemic sovereignty, cultural identity, and the right to define the production, valuation, and transmission of knowledge and skills. Despite global policies promoting employability and innovation, many TVET systems in the South remain constrained by colonial and neoliberal paradigms that benefit from imported supply-side standards, Western competency frameworks, and market-oriented governance. These conditions create dependency, displace Indigenous models of learning, and constrain education's potential as an engine for local empowerment and social change. The study is driven by four key questions: (1) How can TVET systems in the Global South be decolonized to more accurately reflect local knowledge systems, cultural values, and community-based practices? (2) What governance and financing models can guarantee that skill formation is equitable, sustainable, and autonomous? (3) How can regional cooperation and digital innovation enhance the mutual recognition of qualifications, cross-border mobility, and inclusive growth? (4) How does a decolonial approach to skills formation contribute to epistemic justice and social cohesion in a variety of Southern contexts?

With these questions in view, this paper develops a dynamic analytical framework that moves beyond binaries (*e.g.*, global *vs.* local or academic *vs.* vocational) to situate skill

formation within a relational, contextualized, and transformative framework. By operationalizing the four-pillar framework of knowing, doing, being, and feeling, against documented realities in TVET institutions, the study intends to articulate a non-centric, decolonial vision for reimagining TVET governance and practice in the Global South.

LITERATURE REVIEW

Over the past two decades, research on education in the Global South has gained momentum, focusing on themes of expansion, inequality, and epistemic justice. While higher education has received considerable attention, the TVET sector, which directly shapes skill formation, remains under-theorized. Emerging studies indicate that the central challenge for Southern TVET systems is not merely access or enrollment but structural inequities in quality, governance, and epistemic recognition. This body of literature underscores the "Knowing" dimension of TVET, emphasizing how the production, recognition, and governance of knowledge fundamentally shape skill development and determine which epistemologies are prioritized in Southern contexts.

According to UNESCO (2021, 2023), participation in postsecondary and vocational education in Asia, Africa, and Latin America has increased significantly. However, this growth has been uneven. Emerging economies such as China and Brazil have invested heavily in TVET infrastructure and digital skills, whereas many African and South Asian countries struggle with underfunded institutions, outdated curricula, and limited industry partnerships. According to the Financing for Sustainable Development Report 2023 by the United Nations Interagency Task Force on Financing for Development, disparities in financing for sustainable development have widened, development framework highlights the impact of financing on addressing low-income sectors related to energy, Sustainable Development Goals (SDGs), and climate.

In recent years, a number of researchers have argued that neoliberal reforms have transformed TVET globally into a market-driven system focused on competitiveness, employability, and performance measurement, often at the expense of public responsibility and social inclusion (Shahjahan, 2016; Tikly, 2004). This trend has privileged private providers and donor-driven agendas, marginalizing local knowledge, community learning, and traditional craft-based skill systems. In Southern African contexts, UNESCO has played a decisive role in shaping TVET governance and curricular orientations, often reinforcing global policy models and standardized frameworks aligned with international labor market demands (Preckler Galguera, 2018). In

addition, TVET policies in South Africa have been critically examined through a Freirean lens, highlighting the importance of career empowerment and pedagogical approaches that address structural inequalities (Majola, 2025). Researchers, such as Altbach and de Wit (2020), have suggested that Southern systems are often encouraged to mimic Northern standards, leading to dependency and the erosion of local models for skills development. Recent scholarship also emphasizes the need to rethink vocational education and training beyond formal structures, promoting sustainable approaches that are contextually grounded and responsive to local social and economic realities (McGrath & Russon, 2023).

Simultaneously, the literature documents an ongoing digital transformation in vocational learning literature. Digital TVET is reshaping skill acquisition and certification through simulators, open learning platforms, micro-credentials, and virtual laboratories (Mhlanga & Moloji, 2020; Selwyn, 2013). However, persistent digital inequalities hinder full participation in the knowledge economy. Furthermore, digital platforms themselves may carry neo-colonial norms, such as Western-designed software and English-language dominance, which can reinforce existing hierarchies. Without improved teacher capacity, culturally relevant pedagogy, and efforts to bridge the digital divide, these gaps may widen.

Within the "Doing" dimension, the literature highlights the translation of knowledge into practice through practical skill formation, hands-on training, and the use of digital technologies. It also demonstrates how access to these tools mediates the effectiveness and equity of vocational learning.

A truly decolonial digital TVET approach would integrate local knowledge, support multilingual learning, and align skill formation with community-based practices. Another significant area of literature concerns regional qualification frameworks and mobility. The African Continental Qualifications Framework, the ASEAN TVET Council, and the Latin American Skills Network promote cross-border recognition of skills and qualifications, facilitating workforce mobility and regional cooperation (Knight, 2013a). More and more countries in the Global South are showing greater commitment to South-South collaboration and the localization of global standards in ways relevant to their cultures and economies.

In addition, decolonial scholars such as Connell (2007) and Mignolo (2009) emphasize that TVET reform must extend beyond technical efficiency and economic productivity to encompass epistemic sovereignty—the right of societies to determine what knowledge and skills are valuable. Integrating Indigenous and feminist perspectives into vocational

curricula can make learning fairer and better adapted to the real world. The "Being" dimension reflects the development of professional and cultural identity within TVET, encompassing epistemic sovereignty, recognition of local knowledge, and the cultivation of practitioners' ethical and social responsibilities. Consequently, decolonizing TVET can foster transformative justice and cultural affirmation in the Global South beyond the classroom, creating more inclusive development opportunities.

The COVID-19 pandemic reshaped educational inequalities, particularly concerning digitalization. While the pandemic accelerated the global transition to online and blended learning, it also exposed weaknesses and profound digital divides within and between nations. A recent study (Allais, 2023) suggests that several African and South Asian TVET institutions may lack the digital infrastructure, educator capacity, and digital literacy needed to adapt their training and assessment systems effectively, and that digital skills development opportunities for TVET trainers in Sub-Saharan Africa remain restricted. As noted by a number of studies, technology can either mitigate or exacerbate educational inequalities, depending on resource distribution, policies, and governance mechanisms. The "Feeling" dimension captures the affective and value-based aspects of learning, highlighting learner engagement, motivation, and the role of culturally responsive pedagogies in fostering inclusion, empowerment, and community-centered education.

The discourse on "decolonization" and "epistemic justice", once prominent mainly in higher education, has now become equally vital for vocational and technical education. Decolonizing TVET involves challenging Western-defined "quality" standards and refocusing Indigenous knowledge, community-based practices, and culturally embedded forms of skill transmission. UNESCO's (2023) report, *Global Education Decolonisation and the Global South*, underscored that locally grounded education systems must recognize communities and their cultural relevance as engines of creativity and innovation.

The future of TVET in the Global South can thus be viewed as twofold: It demonstrates quick quantitative growth in terms of enrollment and digital participation, yet it is hampered by persistent qualitative and structural inequalities in governance, access, and technology. The central challenge ahead is to achieve massification without marginalization—ensuring that expansion is coupled with quality, cultural integrity, and relevance.

Moreover, regional and collaborative initiatives in TVET have been emphasized as critical for building institutional

capacities and fostering context-specific innovations that are relevant to local economies and social realities (UNESCO, 2021). South-South cooperation in research, policymaking, and professional mobility plays a vital role in TVET development. Regional partnerships and collaborative digital platforms can strengthen institutional capacities and foster context-specific innovations relevant to the local economy and social realities.

Ultimately, the literature suggests that decolonizing skills formation involves more than curriculum reform or funding redistribution; it is also about achieving intellectual and technological sovereignty. The TVET systems of the Global South must become self-driven enterprises of development, equity, and knowledge creation.

METHODOLOGY

This study applies a qualitative-analytical documentary approach to examine TVET dynamics in the Global South. The research process is informed by a critical-constructivist lens that considers knowledge production and skills formation to be historically and politically situated, shaped by a global, neocolonial legacy linked to neoliberal reforms and local epistemologies. A qualitative documentary approach facilitates the comparison of policies, governance frameworks, and reform trajectories across the South without the constraints of primary fieldwork.

The study deliberately draws on a broad corpus of relevant, credible, and representative documents and statistical reports, including publications from UNESCO, the International Labour Organisation, the World Bank, and other international and regional agencies. We acknowledge that documents from major international organizations may reflect Northern-centric perspectives. To mitigate this potential bias, we triangulated these sources with regional documents, national policies, and academic literature that reflect local contexts, thereby ensuring a more balanced and contextually relevant analysis. It also analyzes national TVET policy documents, strategic frameworks, regional initiatives on qualification frameworks and skill mobility, and peer-reviewed academic literature on vocational education, digitalization, and decolonial theory. Documents were deliberately selected from diverse regions, including Africa, Latin America, South and Southeast Asia, and the Middle East.

The analysis covers the 2010-2024 period, the post-pandemic timeframe marked by accelerated reform, globalization, neoliberal restructuring, and digitalization. Earlier theoretical contributions were integrated where relevant to maintain conceptual continuity.

Data interpretation involved thematic coding analysis. Documents were read repeatedly, and ideas were coded both deductively, using the study's theoretical lens of knowing, doing, being, and feeling, and inductively, to allow new themes to emerge. Major themes identified included governance and financing, university-industry partnerships, digital transformation, regional qualification frameworks, and epistemic sovereignty. The researchers then analyzed different types of documents, such as policies, statistics, and academic studies, to identify similarities and differences between their findings. Context was added to the qualitative findings using relevant descriptive indicators, such as enrollment trends, government expenditure ratios, and digital infrastructure.

As a documentary and interpretative study, this research does not employ inferential statistics. The researchers maintained reflexivity regarding their positionality and the diverse cultural contexts of Southern education systems. The intention was not to generalize across all countries but to identify common structural conditions while acknowledging the diversity of responses. The analysis was validated through the verification of credible sources.

This methodological approach allows for a critical and context-sensitive analysis of TVET systems in the Global South. By combining qualitative documentary analysis with a theoretical lens of Knowing, Doing, Being, and Feeling, the study not only examines policies, governance, and financing but also interprets their interactions with cultural, social, and digital transformations. This approach provides a nuanced understanding of structural conditions, epistemic sovereignty, and opportunities for equitable, locally relevant skill development, highlighting the strengths and limitations of Southern TVET systems in ways that would not be achievable through purely quantitative methods or primary fieldwork alone.

RESEARCH FINDINGS

The analysis reveals systemic inequalities in access, quality, and financing for TVET among developing countries. While many Southern countries have reformed their vocational education systems to meet market demands, progress toward equitable and sustainable skills development has been slow. Between 2010 and 2023, key indicators (enrollment rates, institutional capacity, and public investment) progressed at different rates across regions.

In South Africa, participation in postsecondary and vocational education among young adults has expanded significantly over the past decade. While this represents increased access, significant inequality persists, disproport-

Table 1: Comparative indicators of TVET development in selected Global South countries (2010-2023)

| Country | Post-secondary/tertiary attainment (2023, %) | Gov. spending on education (% of GDP, 2023) | Observed trend | Interpretation |
|--------------|--|---|---|--|
| South Africa | Approximately 50% (fluctuating) | Approximately 6.8% | High investment but unstable attainment | Strong fiscal commitment, but governance inefficiency persists |
| Egypt | Approximately 21% (stable) | Approximately 4.0% | Moderate progress under steady investment | Incremental improvement; structural reforms still needed |
| India | Approximately 14%-15% (steady growth) | Approximately 4.1% | Gradual increase with limited funding | Policy consistency supports gradual human capital growth |
| Brazil | < 10% (incomplete data) | Approximately 6.0% (declining after 2020) | Declining investment and weak attainment | Economic constraints and policy volatility affect progress |
| China | Data not shown in attainment chart | Approximately 4.2% | Moderate, stable spending | Balanced funding with growing focus on system efficiency |

Sources: OECD (2023), UNESCO (2021), World Bank (2023). TVET, technical and vocational education and training.

tionately affecting poorer populations. Government expenditure on education increased from approximately 5.5% to nearly 6.8% of Gross Domestic Product (GDP) over a decade, yet inconsistent governance and uneven institutional performance limited the developmental impact of this increased investment. In Egypt, the public TVET system struggles with obsolete courses, inadequate equipment, and limited employer engagement, with TVET spending remaining at only 4% of GDP—insufficient to address infrastructure deficits and attract quality teachers.

In India, the proportion of youth enrolled in TVET grew from approximately 9% in 2010 to nearly 15% by 2023, driven by demographic growth and policy reform. The Skill India Mission (or National Skill Development Mission) aimed to improve coordination, but gaps in implementation still exist, particularly in rural and informal economies. Brazil, which previously advanced technical education through programs like SENAI and PRONATEC, has experienced a slowdown since 2020 due to economic contraction and reduced public expenditure.

China has distinguished itself through massive investment in TVET, significantly improving quality and employability via dual-system education and digital TVET initiatives. Nevertheless, a gap persists between well-resourced coastal provinces and inland regions with limited access and technological readiness. Public sector spending on TVET is likely 4% of GDP, comparable to other countries in the developing world, but it is supplemented by private sector participation and additional funding from local governments.

In summary, while the Global South has made noticeable strides in the growth of vocational education, the benefits have not been evenly distributed. Differences in financing, governance efficiency, and digital preparedness continue to create divergent reform pathways. Sustaining improvements in TVET requires more than funding. To ensure that skills

development is geared toward inclusive growth and epistemic justice in various Southern contexts, integrated governance frameworks, regional cooperation, and digital innovation must be ensured.

The findings (Table 1) indicate that increased funding for TVET across the Global South does not automatically lead to improved education or equitable access. Beyond a certain point, additional spending may yield diminishing returns without efficient governance, coordination, and quality assurance. Despite marked improvements in enrollment, unequal skill outcomes, institutional performance, and employment linkages show that funding alone cannot drive a transformation.

South Africa's large-scale investment around 6.8% of GDP (World Bank, 2023) in vocational education reflects ambition but is coupled with inconsistency. In contrast, Egypt has steadily improved, with stable but modest funding levels, since a steady stream of reforms has enhanced institutional reliability. This suggests that well-designed policies and systemic reforms may yield more sustainable outcomes than short-term funding increases alone.

The findings underscore that the Global South requires structural reform to complement its financial expansion. Investment effectiveness depends on strategic allocation—for teacher training, digital infrastructure, and industry partnerships. Reallocating budgets among schools to address specific needs can enhance equity and quality more effectively than simply expanding overall expenditure. Transparent, accountable, and participatory governance is crucial to prevent wasteful spending in the education sector.

The analysis concludes that passive or unchanged education systems will exacerbate inequalities amid technological, economic, and demographic changes. TVET reform in the Global South therefore requires a shift from funding-driven

models to capability-driven systems. A better TVET system depends not on spending more but on spending wisely and equitably to empower creators, teachers, and communities.

These funding and governance challenges directly relate to the four-pillar framework. Limited financial resources and inconsistent policies restrict "Knowing" by reducing access to high-quality educational content and up-to-date training materials. Insufficient support for practical learning and industry engagement impedes "Doing" as learners cannot fully develop the skills required in the labor market. Weak institutional governance undermines "Being" limiting the development of professional identity and confidence among teachers and students. Finally, the absence of inclusive decision-making and community engagement diminishes "Feeling" reducing solidarity, trust, and a sense of belonging within TVET systems.

By explicitly connecting these macro-level observations to the dimensions of Knowing, Doing, Being, and Feeling, the study highlights that reform efforts must go beyond financial inputs, focusing instead on structural, cultural, and relational capacities to achieve equitable, contextually relevant, and transformative skill development in the Global South.

HISTORICAL-POLITICAL PHASES OF TVET IN THE GLOBAL SOUTH

The institutional construction and expansion phase

Higher education in the Global South in the post-colonial period became a central instrument for nation building, modernization, and human capital formation. From the 1950s through the 1970s, education remained primarily a state-led project. Newly independent states in Africa, Asia, and Latin America established universities and expanded public education systems, framing these efforts within a pervasive developmental ideology that was explicitly linked to economic and social progress (Carnoy, 1974).

During this era, universities were potent symbols of a new national identity. They were charged not only with the production of knowledge but also with the cultural expression of freedom and sovereignty. States allocated a significant amount of their often-limited resources to creating access to tertiary education. Despite these constraints, a prevailing sense of optimism existed about the potential to build Indigenous knowledge systems and institutions dedicated to serving local interests (Altbach & Selvaratnam, 1989).

However, such systems were often initially built according

to Western institutional models, in particular those of former imperial or colonizing powers, which engendered structural dependencies and a continuity of Eurocentric knowledge frames (Mamdani, 1996). Such dependence hindered the capacity for epistemic autonomy and helped set the stage for later tensions between global standards and local applicability.

Neoliberal shock and global restructuring of TVET

Since the 1980s, the Global South has experienced significant educational and economic changes owing to the worldwide diffusion of neoliberalism. According to Varghese (2004), international financial institutions, the World Bank, and the International Monetary Fund (IMF) encouraged structural adjustment programs (SAPs) with strict fiscal policy imposition, public expenditure control in education, privatization, and market-oriented reformatting. In the subsequent global restructuring, TVET systems were notably impacted by a shift in governments' views of education from a public benefit toward a private benefit that could further the goals of employability and competitiveness.

The neoliberal shift prompted the commercialization of skills development, manifested through the rise of private training centers, cost-sharing, and performance-based funding. While these reforms were ostensibly introduced to increase efficiency, productivity, and labor-market relevance, in practice, they often exacerbated inequalities in access, weakened public institutions, and eroded the social mission of vocational education (Torres, 2008). Consequently, the core orientation of TVET was redefined, prioritizing responsiveness to market demands rather than social inclusion or human development goals.

At the same time, worldwide quality assurance frameworks, international benchmarking, and competency-based education settings, largely based on Anglo-American standards, became the dominant reference points for TVET systems. According to Shahjahan (2016) and Marginson (2011), these mechanisms imposed Northern-centric norms of efficiency, certification, and performance that often became blind to local labor configurations, informal economies, and Indigenous modes of learning.

This dependence established an epistemic asymmetry that structurally marginalized Southern knowledge systems. These countries develop competencies and skill sets based on imported standards that overlook their unique development needs and cultural contexts. This neoliberal restructuring thereby widened the gap between global economic rationalities and local educational realities. It changed TVET from a social institution that encourages collective

empowerment to a technical device of market reproduction. Therefore, the Global South faces the challenge of reclaiming epistemic sovereignty and public purpose in vocational education. It must reframe skills formation not just for employability but for sustainable development, equity, and self-determination.

Regionalism and self-integration in the Global South

The homogenizing pressures of neoliberal globalization and South-South cooperation in higher education

The South-South cooperation trend in regional organizations can be seen as a response to global asymmetries and the homogenizing factors of neoliberal globalization; in recent decades, it has also become increasingly popular with regard to higher education. Regional organizations such as the African Union, ASEAN, UNASUR, and the Belt & Road Initiative (BRI) have encouraged academic partnerships, student exchange programs, mutual qualifications recognition, and collaborative research (Knight, 2013b). These efforts are part of a wider "Southern self-integration" that sees regional actors building independent architecture that reflects shared development agendas, cultural affinities, and knowledge priorities.

For instance, Africa's CESA 16-25 strategy accords pride of place to rejuvenating higher education as a catalyst for inclusive growth, and Latin American networks advocate intercultural curricula and the valorization of Indigenous knowledge (Maldonado-Torres, 2016). Digital technology has also eased transregional educational cooperation by accessing virtual exchange, open-access platforms, and online degree programs, particularly in light of and following the coronavirus pandemic. Such innovations have the potential to supersede geographical, financial, and other barriers—however, issues involving infrastructure and the digital divide are still widely apparent.

The historical trajectory of higher education in the Global South—characterized by cycles of expansion, crisis, and reconstruction—now reveals a clear trend toward reclaiming educational sovereignty. Through the strategic reconfiguration of regional alliances, Southern nations are actively participating in the creation of a more plural and equitable global knowledge order.

Theoretical foundations of a decolonial TVET

Addressing the structural imbalances in global skills formation necessitates more than incremental institutional reform; it requires a fundamental theoretical re-evaluation of how vocational education is understood and governed in the Global South. Southern nations must create a conceptual framework for decolonized skill formation that integrates epistemic, developmental, and cultural dimensions around

TVET rather than passively adjusting to the international model.

The present paper reconsiders three interrelated core principles that define the emerging paradigm of Southern TVET transformation: Educational sovereignty and knowledge decolonization; embedded development and regional co-construction; cultural subjectivity and pluralistic global participation.

These pillars will subsequently be analyzed through the four-dimensional lens of knowing, doing, being, and feeling to illustrate how skills systems in the Global South can reclaim autonomy, foster innovation, and ensure inclusive growth.

Educational sovereignty and knowledge decolonization refers to the right of societies to define their own professional priorities, curricula, and epistemologies. The process of "decolonizing" TVET involves valorizing Indigenous technologies, community-based learning, and regional knowledge systems as legitimate sources of skills development, thereby challenging the universalism of Northern knowledge.

Embedded development and co-construction of regions refers to embedding TVET systems within the local economic and regional ecosystems. Subsystems such as industries, training centers, and policy networks receive recognition and share their respective capacities. Regional qualification frameworks and mobility agreements are essential tools that can build South-South solidarity and ensure that skills mobility promotes local and regional development rather than global labor extraction.

Cultural subjectivity and pluralistic global participation call for the preservation of cultural identities and value systems while engaging globally. Together, the Global South can create various models of learning that are relevant to its varied contexts, models that incorporate ethical, emotional, and ecological sensibilities.

Through this theoretical re-evaluation, TVET is reconceived as more than a mechanism for employability. Shaped by similar social, economic, and political histories, nations of the Global South emerge as key players in influencing the future of global education and work, promoting epistemic sovereignty, sustainable livelihoods, and cultural empowerment.

TVET knowledge decolonization and educational sovereignty

The education sovereignty movement in the Global South reflects a broader epistemic struggle to regain the capability

to control, create, and implement knowledge that corresponds to local realities. Within TVET spheres, this struggle involves rethinking how societies perceive skills, work, and learning. The goal is to move away from foreign-imposed standards of "competence" toward approaches that are context-sensitive and grounded in Indigenous technologies, local economies, and cultural values (Mignolo, 2009; Sousa Santos, 2014).

Developing skills to meet local needs challenges the dominance of Western knowledge systems that frame Euro-American theories and industrial standards as universally valid. This critique is reflected in the growing intellectual and policy movements across the Global South that advocate the pluralizing of knowledge and the reassertion of epistemic sovereignty in vocational learning. Decolonized TVET must not recreate imported occupational models but rather employ community-derived pedagogies, local languages, and Indigenous knowledges and skills as legitimate foundations of technical education.

According to Quijano (2007) and Ndlovu-Gatsheni (2013), epistemic freedom is a prerequisite for equitable and sustainable development. In the TVET context, this means empowering local educators, artisans, industries, and communities to co-design training programs, curricula, and certification systems that reflect their social and economic interests. Participatory approaches shift TVET away from top-down, extractive models of training toward bottom-up systems in which knowledge and skills are co-constructed.

Connell (2007) further argued that Southern institutions should not function as sites of dependency or replication but as spaces that promote intellectual and practical pluralism. By integrating Indigenous epistemologies and regional synergies into TVET governance, the Global South can generate alternative models of skill formation that value not only "doing" and "knowing", but also "being" and "feeling", thereby restoring the human and cultural dimensions of learning.

Assuming responsibility for teaching entails determining local standards of knowledge, competence, and success, thereby establishing inclusive, contextualized, and culturally grounded systems of vocational learning in the Global South.

Embedded development and regional co-construction in TVET

The relationship between vocational education and its socioeconomic and cultural context requires sustained critical examination as the Global South redefines the direction of skill formation. Embedded development suggests that governments must ensure that TVET systems

are aligned with—not transplanted to—local economies, labor markets, governance structures, and sociocultural settings (Altbach, 2015).

This orientation promotes endogenous development: Educational transformation driven by regional needs, shared challenges, and collective action. Regional co-construction thus offers a way forward by supporting the transformation of resource integration, aligning standards, and strengthening institutional capacity in the Global South. Initiatives promoting mutual recognition of qualifications, interinstitutional collaboration, and regional mobility—such as the African Union's Pan-African TVET Framework, the ASEAN TVET Development Council, and Latin American platforms under CLACSO—illustrate this growing commitment (Knight, 2013b).

Countries across the Global South are increasingly diversifying their education and training systems, not through imitating those of the North but through developing horizontal partnerships. Such partnerships strengthen solidarity, cultural affinity, and shared capacity-building among educational institutions and industrial partners. They enable the joint development of regionally relevant quality assurance systems, competence frameworks, and cross-border curricula responsive to local labor realities and global technology trends.

Integrating TVET into regional development agendas facilitates policy coherence across education, employment, and innovation systems. It also supports the recognition of informal and community learning, as well as multilingual technical publications and open resources that increase Southern knowledge visibility. Through cooperative networks like these, the Global South is constructing its own skill governance architecture—one that mediates global competitiveness with social inclusion and epistemic sovereignty.

Ultimately, regional co-construction is not merely an administrative strategy; it is a decolonial form of educational mediation. It enables countries to participate in global networks while preserving local autonomy. This approach reframes vocational education as a domain concerned not only with productivity but also with justice, sustainability, and shared prosperity.

Cultural subjectivity and pluralistic global participation

In reimagining TVET in the Global South, cultural subjectivity must be acknowledged as a basis for real global engagement. Cultural subjectivity refers to the right of every society to assert its identity, values, and development through education (Appadurai, 1996; Thiong'o, 1986). In

the TVET context, this means resisting the manufacture of standardized global training templates while contributing to the development of a pluralistic, context-sensitive system of learning reflective of local crafts, technologies, and world-views.

Even as international accreditation systems that adopt universal benchmarking continue to gain influence, culturally specific subjectivity acts as a countervailing force that enables different societies to negotiate global norms on their own terms. As Marginson and Rhoades (2002) noted, the Global South participates in global education discourse as a participant in the co-production of knowledge rather than as a passive recipient. Decolonial engagement does not imply withdrawal from globalization; rather, it transforms global interaction into a reciprocal process of adaptation, skill exchange, ethical negotiation, and emotional learning.

Decolonial TVET institutions cultivate learners who possess technical skills rooted in a particular culture, are knowledgeable and reflective on issues of ethics, and are aware of the global landscape. The framework of education is not purely technical ("doing") but involves knowledge ("knowing"), identity formation ("being"), and empathy ("feeling"). Incorporating Indigenous languages, stories, and knowledge systems in vocational training enables students to situate their professional learning within meaningful social or cultural contexts. This orientation fosters capabilities that extend beyond employability toward personal flourishing, community responsibility, and planetary well-being.

When engagement with the world is dialogical—a genuine two-way process of engagement—both learners and systems are transformed. TVET systems in the Global South that are culturally rooted and regionally integrated can thus contribute to a global skills ecosystem that is more plural, equitable, and sustainable—rooted locally yet responsive globally.

Creating a flexible analytical model for TVET transformation in the Global South

The Global South requires a multidimensional framework that integrates cognition, practice, identity, and emotion to enable TVET to transition from reactive reform to systemic transformation. The four pillars of "knowing", "doing", "being", and "feeling" provide a holistic analytical lens for rethinking how skills are conceived, governed, and humanized in different regional and cultural contexts. This dynamic structure clarifies how TVET can advance epistemic sovereignty, social inclusion, and innovation.

Knowing: Recognizing structural inequalities and building critical literacy

The first pillar emphasizes critical awareness of global

structures that reproduce inequalities in skills formation. Awareness of the impact of colonial and neoliberal legacies in education policy, funding, and certification development can help educators, policymakers, and learners in the Global South develop critical global literacy (Altbach, 2015).

Doing: Institutional autonomy and contextual implications

Doing, the second pillar, concerns the translation of critical understanding into practical and institutional action. The educational autonomy granted to TVET will require local strategies for aligning training and research with local community needs, regional labor markets, and sustainable development (Odora Hoppers, 2002).

Such efforts may involve governance reforms, enhanced participatory decision-making, reduced donor dependence, and sustainable financing. Regional partnerships and context-specific qualification systems help create relevant standards and quality assurance systems. The act of "doing" therefore embodies the essence of applied sovereignty. It signifies a collective exercise of independence through practical reforms, innovation, and collaboration aligned with local priorities. It represents the articulation of a local voice that does not conform to global templates.

Being: Epistemic identity and transformative selfhood

The third pillar involves the formation of epistemic identity and moral agency at TVET institutions. Education must be understood not merely as the acquisition of technical skills, but as forming individuals and communities capable of critical thought, just action, and transformative leadership. For the Global South, this necessitates reclaiming epistemic selfhood—the ability to affirm its own Indigenous knowledge systems, foster critical historical thinking, and articulate alternative modernities. TVET institutions must, therefore, be guided by missions inspired by local cultures and social systems. From this standpoint, "being" embodies personal, institutional, and societal spheres of transformation, redefining education as a moral-civic act aimed at justice, sustainability, and human dignity.

Feeling: Emotional literacy, solidarity, and humanization of learning

The final pillar, "feeling" acknowledges the integral role of emotion in learning and institution-building. The long history of marginalization in the Global South has produced distinct emotional vocabularies—of pain, pride, hope, and resistance—that can be leveraged to rehumanize TVET. By fostering cultures of empathy, solidarity, and coexistence, these affective dimensions help restore human agency and dignity within vocational education (Nussbaum, 2010).

Integrating emotional literacy into vocational education

does more than enhance the emotional intelligence of teachers and students. It also challenges competitive individualism while reaffirming the ethical and social purposes of education. When we "feel" TVET becomes a space of mutual care and solidarity across communities and countries.

Creating an integrated paradigm of skills sovereignty

The four pillars of knowing, doing, being, and feeling constitute a paradigm of skills sovereignty for the Global South. Under the proposed framework, the concept of TVET corresponds to any formative process that develops an autonomous and socially valid curriculum. It represents a shift from a capitalistic model oriented toward economic exploitation to a human-centered, decolonial model of learning, where education is understood as both a means of survival and a practice of freedom.

Future pathways for higher education in the Global South

The Global South is at a turning point as global transformations reshape knowledge production and learning structures. The central question is no longer whether to participate in global education, but how to do so without reinforcing dependency and epistemic marginality. The path forward requires a foundation of educational sovereignty built on justice, inclusion, and cultural plurality. Higher and technical-vocational education in the Global South must, together, move beyond reactive reforms toward epistemic decolonization, robust regional collaboration, and the strategic use of digital technologies. This model demands a fundamental rethinking of institutional policies, as well as the underlying curricula, pedagogy, and governance structures.

A primary priority is to challenge the scholarly dominance of Western paradigms that continue to define global academic norms. Indigenous wisdom and Southern epistemologies have often been marginalized by Western institutions, languages, and evaluative systems. Universities and TVET colleges in the South must therefore become producers—not merely consumers—of theories and practices grounded in their own realities. This requires South-led research networks, multilingual academic publications, and open-access repositories that reflect diverse intellectual traditions.

Regionalism and South-South cooperation are crucial for rebalancing global educational power. Initiatives such as the African Union's CESA 16-25, the ASEAN University Network, and ENLACES in Latin America exemplify efforts to align policies, recognize qualifications, and enhance the mobility of students, faculty, and skilled

workers. Integrating TVET into these frameworks strengthens the link between education, employability, industrial innovation, and sustainable development. Such cooperation must be supported by political commitment, sustainable funding mechanisms, and respect for linguistic and cultural diversity to ensure that regional integration strengthens, rather than erases, local identities.

Curriculum transformation is central to this future vision. Many Southern universities still rely heavily on Eurocentric canons, imported textbooks, and rote-based learning. A decolonized curriculum would take local histories, ecologies, and knowledge systems as its foundation while engaging in global dialogue. This involves pedagogies that honor reflexivity and collaboration, incorporate Indigenous and feminist epistemologies, and align academic and vocational pathways with local knowledge economies. The goal is not isolation but pluralization—advancing a global dialogue that acknowledges there are many valid ways of knowing.

Digital transformation represents both an opportunity and a challenge. Persistent digital inequalities hinder access to learning and open platforms. Universities and TVET institutions must therefore invest in robust digital infrastructure, strengthen digital literacy, and develop locally relevant content. Digitalization should not be perceived as a mere technological fix but as an opportunity to rethink pedagogy, broaden collaboration, and foster inclusive participation in the knowledge economy.

Ultimately, the success of higher and vocational education in the Global South will depend on more than increased resources or enrollment figures. It will stem from the implementation of human-centered and justice-oriented systems. Financial investment alone is insufficient; it must be coupled with the ethical appropriation of resources, transparent governance, and values-based leadership. Education must cultivate empathy, solidarity, and democratic citizenship, transforming students into changemakers rather than mere economic actors.

To summarize, the Global South must move beyond adaptation toward co-creation in the global knowledge order. Through this shift, its institutions can transform the meaning of education in the twenty-first century by reclaiming knowledge sovereignty, building regional solidarities, and fostering digital inclusivity. Moving beyond the pandemic's effects necessitates more than policy or systemic reform; it requires envisioning education as a collective, liberatory project. This project must integrate knowing, doing, being, and feeling in pursuit of justice, human dignity, and sustainable development for all.

Table 2: Future scenarios for tertiary gross enrollment in Africa (2019-2043)

| Year | Gross enrollment ratio (%) - status quo pathway | Gross enrollment ratio (%) - reform-oriented pathway | Key notes |
|------|---|--|--|
| 2019 | 14.0% | 14.0% | Baseline: Among the lowest global levels |
| 2043 | 23.4% | 39.4% | Status quo yields limited growth; reform scenario positions Africa near the global average |

Sources: Institute for Security Studies (2024).

Enhancing knowledge internationalization and applied transfer in Southern universities

Higher education in the Global South must proactively contribute to addressing global challenges, such as climate change, health crises, migration, and democratic erosion. This requires a shift from adaptation to leadership, linking education, research, and skill development with local and global priorities. Southern universities should focus on three strategic areas: First, reorienting research and innovation toward the SDGs and regional needs to ensure that knowledge production is socially relevant; second, strengthening university-industry-community partnerships to foster social innovation, local development, and work-based learning; and third, producing graduates who are globally adept and locally capable.

International networks and research consortia can enhance the visibility and influence of Southern institutions. Internationalization should be pursued with a focus on equity and relevance, not merely ranking competition, enabling Southern institutions to become co-creators of knowledge.

As illustrated in Table 2, data from the Institute for Security Studies (2024) suggests that the future of African higher education hinges on the choice between incremental reform and structural transformation. In 2019, Africa's gross enrollment ratio (GER) was approximately 14%, among the lowest globally. At a status quo trajectory, the most optimistic projections suggest a GER of only 23.4% by 2043. While an improvement, this would leave Africa far below global averages and marginal in international higher education. Conversely, far-reaching reforms in governance, financing, equitable access, and digital infrastructure could establish a transformative trajectory, preparing Africa to participate in the global knowledge economy even if the gap with advanced regions persists. However, quantitative growth in enrollment must not be conflated with quality improvement. Expanding participation in the digital sector does not automatically close the digital divide or address structural inequalities, particularly for low-income and rural communities (UNESCO, 2021, 2023). There is an urgent need for quality and justice-oriented growth.

The Four-Pillar Framework of knowing, doing, being, and feeling underscores that such progress requires systemic

transformation. This involves acknowledging the historical injustices, dependencies, and global hierarchies that shape African higher education. Reforms in governance, resource allocation, and digital ecosystems must ensure that access translates into meaningful learning outcomes. Emphasizing the pillars "knowing" and "being" reaffirms the need for institutional autonomy and epistemic sovereignty, enabling African universities and TVET institutions to generate and circulate knowledge relevant to their societies. Similarly, "feeling" is essential to generate inclusive, ethical, and justice-driven educational cultures that redress the marginalization of Indigenous and other groups.

To sum up, the advancement of higher education in Africa is not merely a question of increased capacity but rather balanced reforms in policy, finance, institutional development, and social justice. By blending expanded access with equity and quality, Africa can convert its demographic dividend into a sustainable educational and socio-economic dividend. To this end, African universities—public, private, and vocational—must evolve into cooperative knowledge systems that advance a plural, decolonized, and equitable world order.

DISCUSSION

This analysis affirms that higher education in the Global South is a complex domain characterized by both transformative potential and persistent obstacles rooted in colonial history. Following independence, nations across Africa, Asia, and Latin America expanded their higher education systems to drive nation-building, skill formation, and cultural renewal. Governments invested heavily in public institutions to strengthen Indigenous knowledge systems, promote cultural sovereignty, and build human capital for modernization. According to UNESCO, the increase in enrollment rates across the Global South over the last decade represents a notable policy achievement and growing social demand.

Yet, this expansion has been profoundly uneven. Chronic resource shortages, weak infrastructure, and reliance on Eurocentric institutional models have often weakened autonomy and strengthened epistemic dependence. Imported systems frequently constrain local innovation.

During the 1980s, the IMF and World Bank imposed neoliberal structural adjustment programs that exacerbated these issues by promoting privatization, austerity, and marketization. While sometimes improving efficiency, these measures often eroded equity, limited academic freedom, and subjected universities to a global competitiveness framework. Many Southern governments currently allocate only 1%-2% of their GDP to higher education, reflecting an ongoing tension between aspirations for global competitiveness and the imperative of local relevance.

In response, a new wave of regional cooperation and integration is emerging. Initiatives like Pan-African University, the ASEAN University Network, and ENLACES represent efforts to build independent educational ecosystems characterized by mutual recognition, common standards, and knowledge solidarity. These initiatives aim to facilitate South-South exchange and joint research. In addition, establishing a just social contract in education requires protecting the interests of vulnerable groups through enhanced university capacities and social accountability frameworks.

This transformation is powered by decolonized research. Universities must generate new knowledge that serves their communities and cultures rather than merely replicating imported curricula. Scholars such as Mignolo, Santos, and Ndlovu-Gatsheni (2013) have argued that asserting epistemic sovereignty is essential to ending structural injustice, contending that higher education should foster liberation rather than dependency in students. Integrating TVET into this framework is vital for connecting theory with practice, ensuring employability, and maintaining social relevance.

The findings indicate that meaningful educational change requires the alignment of knowledge production, institutional governance, and cultural affirmation. National governments play a crucial role in building scientific infrastructure, expanding digital connectivity, and creating funding mechanisms. Curricular and pedagogical transformation for inclusive growth must be accompanied by investments in laboratories, teacher training, and equitable access to technology, particularly for disabled and marginalized learners.

Viewing these dynamics through the Four-Pillar Framework clarifies the deeper dimensions of change. "Knowing" entails a critical understanding of the historical, hierarchical, and systemic dependency relations that shape Southern education. "Doing" focuses on implementing reforms in governance, funding, and inter-institutional collaboration to foster education autonomy. "Being" involves affirming an epistemic identity and institutional self-confidence that

enable universities and TVET centers to be producers of knowledge. "Feeling" shapes the ethical and emotional bases of education, cultivating the solidarity, empathy, and practice of justice necessary for transformative learning.

Moving forward requires not only restructuring but also a shift in values and thinking. Southern higher education can only reach its full potential when aligned with the pursuit of social and cultural justice. Through strategic growth, deeper collaboration, and pedagogical innovation, Southern universities and colleges can become co-designers of the global order rather than sidelined participants. This study, by integrating empirical evidence with theoretical reflection, demonstrates that the Global South's higher education is not only catching up but is actively redefining the meaning of education for a pluralistic, just, and interconnected world.

CONCLUSION

The next decade will witness a profound transformation of higher education systems in the Global South, driven by multiple forces—historical, economic, cultural, and technological. The South is no longer on the periphery but is increasingly at the center of intellectual contestation, cultural renewal, and structural change. This study identified both emerging and persistent blockages, underscoring the continued struggle for epistemic agency. Addressing these challenges requires a firm commitment to institutional autonomy and educational justice.

Across Africa, Asia, and Latin America, higher education discourse has been shaped by competing colonial legacies, post-independence nation-building, and neoliberal globalization. While massification and modernization have expanded access, they have also reproduced structural inequities and epistemic subordination, often through donor-driven policies and imported evaluative frameworks. This has created a defining paradox for Southern systems: Growth without autonomy.

However, recent changes suggest that a shift is underway. Regional cooperation, decolonial movements, and digital transformation programs are fostering renewed attention to knowledge sovereignty, cultural recognition, and epistemic justice. Universities and TVET institutions in the South are increasingly determined to move from dependency to interdependence, from imitation to innovation, and from adaptation to co-creation. Through processes centered on Indigenous research, South-South partnerships, and inclusive digitalization, the Global South is disengaging from a merely reproductive role in the global knowledge economy.

The Four-Pillar Framework—knowing, doing, being, and

feeling—provides an integrative lens for understanding this transformation. "Knowing" involves critical insight into historical differences between structural and sociopolitical contexts. "Doing" focuses on governance reforms, localized innovation, and skills formation. "Being" affirms epistemic identity and institutional autonomy. "Feeling" fosters solidarity and ethical responsibility for justice-oriented practice. Together, these dimensions outline a model of education that unites intellectual rigor with social compassion and moral imagination.

The future of education in the Global South will depend on how well systems convert these ideas into practice. Meaningful change is not merely about new policies or infrastructure; it is about tackling global injustices, recentering human dignity, and embedding ethical and cultural values into the core of learning. If successful, such efforts can transform Southern higher and vocational education sectors from sites of dependency into engines of knowledge creation and social progress. By engaging in dialogue and asserting authority over their knowledge, communities across the Global South—including historically marginalized groups—can work toward a fairer and more equitable world.

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Sleymane Mohamed Y conceptualized the study, conducted the literature review, performed the analysis, and wrote the manuscript. Bao R provided academic supervision and critical revisions. Both authors have read and approved the final version of the manuscript.

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Generative AI use declaration

The authors used ChatGPT (GPT-5.3, OpenAI) in a limited

capacity for editorial support, including language refinement and clarity enhancement. The AI tool had no involvement in the conceptualization, methodology, data analysis, or interpretation of the study. The authors assume full responsibility for the integrity and originality of the work.

Data availability statement

All data generated or analyzed during this study are included in this published article.

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