

Africa Skills Week 2024

UNESCO-UNEVOC: Empowering Africa's future through TVET

Africa's potential

Africa stands as a continent of immense potential, boasting:



a young population



growing
innovation and
entrepreneurship



vast agricultural
potential



strategic global
location



rich cultural
diversity



abundant natural
resources and
biodiversity



renewable energy
opportunities

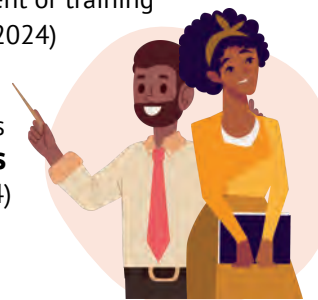
ASW THEME
CREATING JOBS
FOR THE 21ST CENTURY:
UNLEASHING THE POTENTIAL
OF TRANSFORMING SKILLS
DEVELOPMENT FOR
SUSTAINABLE
EMPLOYABILITY

Significant challenges persist



22% of African youth
aged 15-24
are not in education,
employment or training
(ILO Stat 2024)

Sub-Saharan Africa needs
15 million teachers
(UNESCO 2024)



In many sub-Saharan African
countries, school lessons are
not taught in languages
learners speak at home



Poverty and
economic
constraints



Conflict and
instability



Gender
disparities



Digital
divide

UNESCO-UNEVOC's commitment to Africa

In the African Union's Year of Education 2024, UNESCO-UNEVOC reaffirms its dedication to the continent's development through TVET.

Focus areas:

- Improve access to education
- Enhance quality teaching and learning
- Promote lifelong learning opportunities

Alignment with regional strategies:

- Continental Education Strategy for Africa (CESA 2016-2025)
- Continental TVET Strategy
- SDG 4 implementation in Africa

UNESCO Strategy for TVET 2022-2029



Cross-cutting interventions

National, regional and global policy learning

Data collection, research and analysis

Normative instruments

Network and partnerships

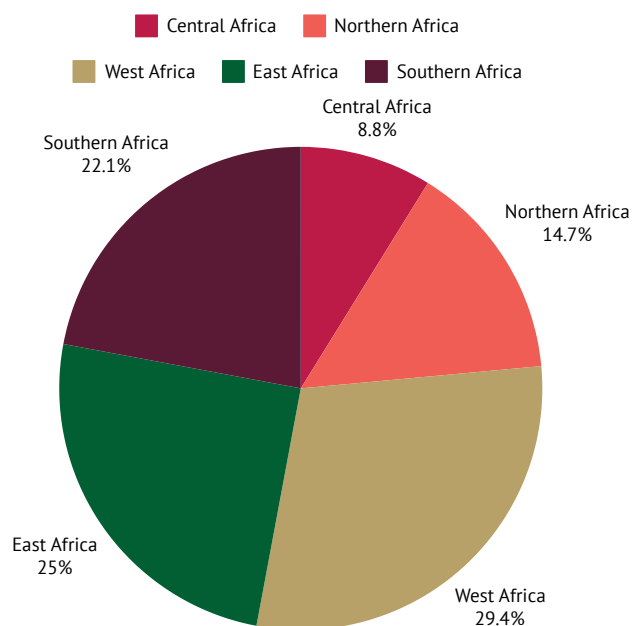
Key initiatives:

UNESCO-UNEVOC has engaged Africa in various service offerings, including:

- Capacity building for TVET institutions
- Promoting innovation and excellence in TVET
- Supporting Green and Digital Transformation
- Fostering equity and inclusion
- UNEVOC TVET Leadership Programme
- Bridging Innovation and Learning in TVET (BILT) project
- Global Skills Academy partnership
- UNEVOC Co-Action Initiative

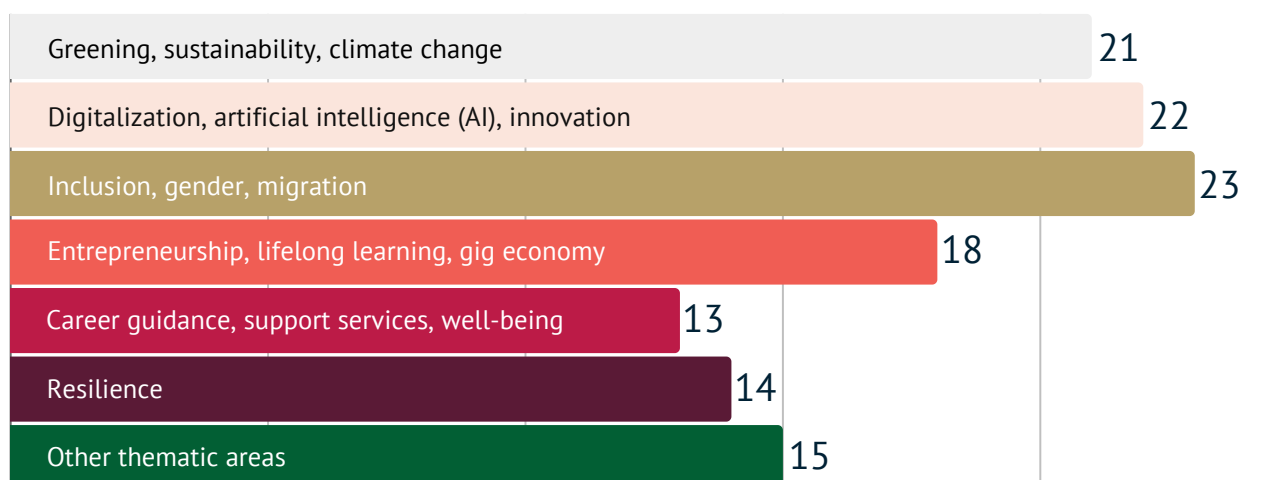
Did you know?

- Africa is a global priority for UNESCO.
- Africa is the largest region in the UNEVOC Network, accounting for 29% of its total membership.
- Ministries and national bodies account for 51% of UNEVOC Centres in the region



TVET studies for Africa's future, conducted between 2021-2024

As a contribution to Africa Skills Week 2024, UNESCO-UNEVOC compiled information from sixty-seven TVET studies about Africa. African research in the past three years has primarily focused on the following key themes:



Who is researching TVET in Africa?

Studies were submitted from 26 countries: Benin, Cameroon, Egypt, Ethiopia, France, Germany, Ghana, Guinea-Bissau, India, Kenya, Liberia, Madagascar, Malawi, Mauritius, Nigeria, Rwanda, Somalia, South Africa, South Sudan, Sudan, Switzerland, Tanzania, United Arab Emirates, United Kingdom, Zambia

Key findings

TVET research in Africa is increasingly focused on addressing systemic challenges, while leveraging opportunities presented by technological advancements and growing recognition of the importance of TVET. Key findings from the compiled research papers include:

1. Challenges

- Digital divide and lack of ICT infrastructure in many African countries hinder the implementation of digital learning solutions.
- Gender disparities in TVET participation and outcomes.
- A mismatch exists between TVET curricula and labour market needs.
- TVET institutions face inadequate funding and resources.
- There is a shortage of qualified TVET teachers and trainers.
- Negative perceptions of TVET persist compared to academic education.

2. Opportunities

- Recognition of TVET's role in addressing youth unemployment and skills gaps is growing.
- There is a potential for public-private partnerships to enhance TVET quality and relevance.
- There is an increasing focus on entrepreneurship education within TVET programmes.
- Emerging technologies are offering new ways to deliver TVET (e.g., mobile learning, virtual reality).
- Existence of regional cooperation initiatives to harmonize TVET systems and qualifications.

3. Focus areas

- Digitalization and ICT integration in TVET delivery and management.
- Green TVET to address climate change and promote sustainable development.
- Enhance TVET teacher training and professional development.
- Improve TVET quality assurance mechanisms.
- Strengthen industry-education partnerships.
- Promote inclusive TVET practices, particularly for women and marginalized groups.
- Develop national qualification frameworks and recognition of prior learning systems.

4. Research trends

- Evidence-based policymaking in TVET is receiving increased attention.
- There is a growing interest in comparative studies of TVET systems across African countries.
- There is a focus on innovative pedagogical approaches in TVET, including competency-based training.
- There is an exploration of indigenous knowledge integration in TVET curricula.
- There are studies on the impact of TVET on employability and economic development.

5. Gaps and future directions

- Need for more longitudinal studies on TVET outcomes and impact.
- Limited research on TVET in informal and non-formal settings, which are common in Africa.
- Lack of comprehensive data on TVET participation, quality, and outcomes across the continent.
- Need for more research on financing models for sustainable TVET systems.
- Limited studies on the role of TVET in addressing emerging challenges like climate change and rapid technological advancements.

10 recommendations for the future of TVET in Africa (based on submitted studies)

1. Focus on digital transformation

'There is a need to develop ICT infrastructure and digital skills to support the integration of technology in TVET delivery.'

2. Enhance gender equality

'Gender-responsive TVET policies and practices to address the underrepresentation of women in certain TVET fields.'

3. Improve alignment with labour market needs

'Industry-education partnerships to ensure TVET curricula align with labour market demands.'

4. Increase funding and resources

'Adequate funding and resources for TVET institutions to improve infrastructure and equipment.'

5. Enhance teacher training

'Improve TVET teacher education and professional development programmes.'

6. Promote entrepreneurship education

'Integrate entrepreneurship education into TVET curricula to foster job creation and self-employment.'

7. Develop quality assurance mechanisms

'Establish robust quality assurance systems for TVET programmes.'

8. Foster regional cooperation

'Enhance regional cooperation for harmonization of TVET qualifications and standards across African countries.'

9. Promote green skills

'Integrate environmental sustainability and green skills into TVET curricula.'

10. Improve data collection and research

'Enhance TVET data collection and research to inform evidence-based policymaking.'



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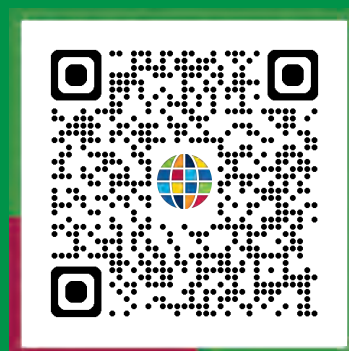
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To review the studies, please scan this QR code.

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TVET research in Africa 2021-2024

This collection of research papers aims to highlight the transformative potential of TVET across the continent.

This initiative, organized by UNESCO-UNEVOC and supported by various partners, invited research contributions that explored innovative approaches to skills development, addressing the urgent need for job creation in the 21st century over the last three years (2021 to 2024).

This summary document of studies, provides a deeper understanding of how TVET can be a catalyst for change, driving economic growth and social equity across Africa, and closely align with this year's Africa Skills Week theme: **"Creating Jobs for the 21st Century: Unleashing the Potential of Transforming Skills Development for Sustainable Employability."**

The studies showcase diverse perspectives, best practices, gaps, and opportunities within TVET systems that can be leveraged to transform skills development under the following themes:

- Greening/Sustainability/Climate Change
- Digitalization, Artificial Intelligence, Innovation
- Inclusion, Gender, Migration
- Entrepreneurship, Lifelong Learning, Gig Economy
- Career Guidance, Support Services, Well-being
- Resilience
- Other categories

As you delve into these contributions, find relevant studies that address your center's or country's needs and connect with the authors for further insights. This collection is organized alphabetically by author for ease of navigation.

While the authors have presented remarkable reports, UNESCO-UNEVOC does not guarantee or take responsibility for the content received, its quality, completeness, or correctness. Additionally, the studies do not necessarily reflect the views, opinions, or positions of UNESCO-UNEVOC; nor does this constitute an endorsement, recommendation, or approval of any study outcomes, findings, or conclusions by UNESCO-UNEVOC.

UNESCO-UNEVOC expresses its gratitude to all authors who submitted their research studies.



Anderson Keah, Liberia

Sustaining TVET for Africa's Future: Lessons from Liberia's Youth Rising Project
Research paper

Thematic area: Greening/Sustainability/Climate Change

Contact researcher via email to receive article: joekeahbale91@gmail.com

This study investigates the sustainability of donor-funded Technical and Vocational Education and Training (TVET) projects in Liberia, using the Youth Rising TVET project as a case study. The research, which is a part of a larger thesis study, addresses two of four key questions: the impact of government support on project sustainability post-donor funding and how competitive benefits (wages and working conditions) influence the retention of TVET stakeholders.

Employing a quantitative survey design, data was collected from 60 respondents, including TVET trainers, UNIDO project coordinators, and government staff. The findings reveal a strong positive correlation between government support and project sustainability, with 75% of respondents affirming the critical role of continued government involvement. Additionally, 50% of respondents expressed a high likelihood of leaving for private sector opportunities if better benefits were offered, highlighting the importance of competitive wages in sustaining TVET projects.

The study concludes that long-term government commitment and improved working conditions for TVET personnel are essential for ensuring the longevity of such initiatives post-donor funding. Future studies can explore the lived experiences of key TVET stakeholders to provide a more in-depth understanding of the personal and professional factors influencing the sustainability of these projects.



Anne Naliaka Mutsami, Sigalagala National Polytechnic, Kenya

Influence of entrepreneurial opportunities on women participation in development agenda in Kenya

Research paper

Thematic area: Entrepreneurship, Lifelong Learning, Gig Economy

Contact researcher via email to receive article: annemutsami@gmail.com

Efforts to increase women participation by government have focused on creation of Women representative positions and financial aspect of enterprises. However, Kenya continues to experience lag in women participation despite the fact that women comprise significant proportion of its citizenry. Scholars have given different perspectives on the influence of entrepreneurship opportunities on women participation in development agenda. Therefore, this study examined entrepreneurship opportunities and women participation in development agenda in Kenya. The study targeted 100 women. A purposive sampling technique was used due to the unique and dynamic nature of women with a sample size of 40. Research design used is explanatory research design due to the cause effect nature of entrepreneurship opportunities on Women participation. Questionnaires were used. Validity of instruments was tested by discussing them with specialists while reliability was tested using cronbach alpha so as to find the consistency of data. Pilot testing was done to determine reliability of research instruments. Data was analyzed by use of SPSS and presented by tables for easier communication.

In conclusion, an increase in entrepreneurship opportunities determines women participation in development agenda in Kenya. This study recommends boosting efforts by government agencies in addressing inequality of women. This study harmonizes the existing conflicts on determinants of women participation.



Anne Naliaka Mutsami, Sigalagala National Polytechnic, Kenya

Resilience of Sigalagala National Polytechnic in Meeting Financial Demands amidst a Fractured Economy

Research paper

Thematic area: Resilience

Contact researcher via email to receive article: annemutsami@gmail.com

The economic landscape in Kenya has faced significant challenges since the COVID-19 pandemic, leading to increased financial constraints for educational institutions, particularly Technical and Vocational Education and Training (TVET) institutions. Sigalagala National Polytechnic (SNP) exemplifies resilience by implementing flexible payment plans and diversifying funding sources through the establishment of production units, including a driving school, bakery, fish farming, beekeeping, and poultry keeping. These initiatives not only generate revenue but also align training programs with labor market needs, enhancing employability for graduates.

The shift to digital learning has further expanded SNP's reach, creating new opportunities for revenue generation. Despite ongoing challenges, such as funding and infrastructure improvements, the institution's proactive strategies have strengthened its financial stability and community engagement. By fostering adaptability and innovation, SNP is positioned for sustainable growth, contributing to food security and economic development in line with Sustainable Development Goal 2. This case study underscores the importance of diverse income streams and community collaboration in building financial resilience within TVET institutions.



Anthony Tolika Sibiya, Centre for Researching Education and Labour, University of Witswatersrand, Johannesburg, Republic of South Africa

Challenges regarding TVET training programs in the SA automotive industry

Research paper

Thematic area: Inclusion, Gender, Migration; Digitalization, Artificial Intelligence, Innovation; Technological changes and work restructuring

<https://doi.org/10.1080/14480220.2024.2369501>

This paper reports on research undertaken to understand the contribution of formal Technical Vocational Education and Training (hereafter TVET) to company-level growth and transformation in the automotive sector in South Africa. This article has been published most recently in an international journal. Its findings are part of a larger research project conducted in South Africa and five other developing countries, namely, Bangladesh, Cambodia, Ethiopia, Laos, and Vietnam, to explore the contribution of TVET programs to inclusive industrial transformation and growth in the manufacturing sectors between 2017-2023.

In this article, I argue that formal TVET does not drive workplace changes in technology, work organisation, and product change happening in the automotive manufacturing sector. Thus, the paper challenges the current formal TVET provision policy in South Africa to recognise other forms of training provision, such as non-formal, and informal on-the-job training, in addition to company-level factors critical in shaping the skills system if we are to understand the extent to which skills enhance growth and transformation to sustain employment.



Christine von Harrach on behalf of the DC dVET (submitter), Donor Committee for dual Vocational Education and Training (DC dVET), Zürich, Switzerland

Formal and Informal VET in Sub-Saharan Africa, Overview, Perspectives and the Role of Dual VET
Research paper

Thematic area: Other, Formal and informal VET in Sub-Saharan Africa

https://www.dcdualvet.org/wp-content/uploads/DC-dVET_Dual-VET-in-Sub-Sahara-Africa_Anthony-Gewer.pdf

In many Sub-Saharan countries, however, VET has an inferior status and there are high levels of contestation between social partners, making the conditions sub-optimal for introducing dual approaches (von Maltitz, 2018). While there are good reasons for referring to the benefits of dual VET also for the further development of VET systems in Sub-Sahara Africa, experience has shown that this requires extensive and context specific discussions and concepts.

This paper seeks to provide an input for the further discussion on the implementation of dual VET practices in Sub-Saharan Africa with a particular focus on upgrading of informal apprenticeships and the role of micro- and small- and medium-sized enterprises (MSMEs) 1. In doing so, the paper takes cognisance of the dangers of wholesale policy borrowing, and the importance of ensuring that models and approaches are adaptable to both the common and differing challenges of countries across the continent.



Clare Nekesa Muhuha, Kitale National Polytechnic, Kitale, Kenya

Green Economy Transition in TVETs; Barriers and Enablers

Research paper

Thematic area: Greening/Sustainability/Climate Change

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Technical and vocational education and training in Kenya have been identified as a pathway in the development of a green economy with the vision of translating the potential of our youth into positive contributors to economic development and national prosperity in ways that are commensurate with the sustainability of resources by meeting the needs of the present world without hindering future generations in the same goal. This goes beyond technological knowledge as an avenue for transition. One pertinent component of a green economy strategy is to address climate change in cognizance of environmental sustainability. With this element of cognition comes the call for adaptive transformation from practices that are deeply entrenched. The overall objective of this article is to gain an understanding of psychological barriers and enablers in the journey of greening TVET in Kenya.

Method used is a systematic literature review on psychological aspects of climate change and Explanatory Research employing qualitative inquiry tools of in-depth interviews that investigated the enablers and barriers in green consumption. Green champions from four National Polytechnics were interviewed, providing thick descriptions until saturation was reached. Results: Barriers to Green economy consumption include, the attitude of the top management of the institution towards green economy, availability of resources, and environmental illiteracy, while enablers include top management attitude, environmental literacy, relevant skills, and employee involvement had a significant positive influence on employee pro-environmental behavior. A combination of strategies befitting each institution and the diverse employee preferences is necessary to enhance employee pro-environmental behavior.

Recommendations: The study recommends that TVET adopt consistent green engagement strategies, such as regular training and open forums on the Green economy. TVET Institutions should also increase their green corporate social responsibility efforts and strengthen the roles of green champions to inspire active participation. Recognizing contextual uniqueness from one institution to another is important.



riungu Festus Kinyua, Mr Joseph Kisito, Thika Technical, Thika, Kenya

Examining Strategies and Interventions to Promote Gender Equality and Social Inclusion in TVET Systems in Kenya

Research paper

Thematic area: Inclusion, Gender, Migration

Contact researcher via email to receive article: riungufk@gmail.com

Gender disparity in TVET systems is a reality today in Kenya, influenced by different factors. This study explored strategies and interventions to promote gender equality and social inclusion in TVET systems in Kenya. Specific objectives included to assess the current landscape of gender equality and social inclusion in TVET in Kenya, to determine key barriers to women participation in TVET in Kenya, and to recommend effective strategies and intervention measures for promoting social inclusion and gender equality in TVET. Secondary data was used in the study, where all search and data verification criteria were used to ensure that only credible sources were utilized in the systematic literature review and analysis.

The study revealed that there were several barriers to women's participation in TVET, including cultural, institutional, and socioeconomic impediments.

In light of the findings, several recommendations were made to improve gender equality and social inclusion in TVET ecosystem. These included establishing mentorship and support networks, implementing focused outreach and recruitment campaigns, creating curriculum content that is gender-responsive, removing obstacles to college entry, advocating workplace diversity and inclusion policies, and enhancing stakeholder collaboration. Overall, this research adds to the conversation on advancing social inclusion and gender equality in Kenyan TVET systems and offers practical suggestions for decision-makers, educators, employers, and other interested parties to establish more inclusive and equitable TVET learning environments.



Elisio José Fernandes, Bissau, Guinée-Bissau

TVET governance analysis
Report

Thematic area: Other, TVET Governance

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My report is based on an analysis of the EFTP system in Guinea-Bissau with a focus on governance and the role of the various public institutions involved in the management and operationalization of vocational training. The report also proposes a governance model with the participation of stakeholders, based on sectoral dialog and consultation.



Emmanuel Ojo, Presha Ramsarup, Nicola Jenkin, School of Education, University of the Witwatersrand, South Africa

Learning to Adapt in a Global Pandemic of COVID-19: Insights to Support Vocational Education and Training (VET) in Southern Africa

Research paper

Thematic area: Greening/Sustainability/Climate Change

https://www.researchgate.net/publication/352516478_Learning_to_Adapt_in_a_Global_Pandemic_of_COVID-19_Insights_to_Support_Vocational_Education_and_Training_VET_in_Southern_Africa

The COVID-19 pandemic impacted all education sectors significantly during the full global lockdown between March and June 2020, including the Vocational Education and Training (VET) sector. During this period, the authors jointly led nine researchers who were postgraduate students in six Southern African Development Community (SADC) countries (Botswana, Eswatini, Mozambique, South Africa, Zambia and Zimbabwe). Due to the restrictions during the lockdown, these nine researchers conducted a literature review and thirty interviews in local communities in these six SADC countries. This included both VET colleges as well as individuals in informal, small-scale and entrepreneurial activities. The authors refer to the qualitative data gathered by the interviews with these interviewees as 'stories of adaptation'. In this paper we used these 'stories of adaptation' to explore the links between learning to adapt and expertise, and to consider how together these constructs offer insights into how VET can be strengthened to better support local communities.

Two research questions were asked: (1) how do the notions of adaptive capacity and expertise as conceptual constructs help to understand vocational learning in a global pandemic and (2) what insights can be drawn from the 'stories of adaptation' to strengthen the role of VET in local communities?

Through a thematic analysis of the 'stories of adaptation', three key findings emerged: (1) capacity to adapt is a multi-level and multi-pronged construct; (2) use of digital platforms as well as local networks were key enabling mechanisms for adaptation; and, (3) learning and expertise are embedded in the capacity to adapt. Thus, we argue that building a responsive VET system for the SADC region is achievable by strengthening the nexus between learning, expertise and adaptive capacity.



Enock Imani, Zizi Afrique Foundation, Kenya

Challenges and Opportunities of Agricultural TVET Institutions in Kenya

Research paper; Written article

Thematic area: Greening/Sustainability/Climate Change

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The Technical and Vocational Education and Training (TVET) system, which offers priceless human resources, is a crucial part of economic development in developing nations. The Kenyan TVET system has not advanced significantly, despite being introduced more than a century ago. Using a case study on the counties of Makueni, Kajiado, and Kakamega, this paper aims to explore the difficulties and opportunities faced by Agricultural TVET institutions in rural Kenya. Data was gathered from a wide set of individuals across gender, age, and socioeconomic backgrounds using a participatory, inclusive, and engaging strategy. With a total of 75 participants (56 female and 19 male), purposeful sampling was utilized to choose informants based on their experiences with the green business skills program.

This approach provided a new and rich understanding of the green business program in the Kenyan counties of Kajiado, Kakamega, and Makueni, specifically in the Latia and Bukura technical colleges where the project was located. The data collected, including both primary and secondary data, was analyzed using thematic analysis. Open-ended interviews with 5 TVET trainers, 66 trainees, and 4 mentors were used to collect primary data, while secondary data included contextual analysis from empirical studies.

According to the study's findings, despite strong economic growth of 6.7% in 2021, Kenya's poverty and youth unemployment rates remain high, estimated at 33.4% and 40%, respectively. The lack of agribusiness opportunities for young graduates from universities and higher education institutions is a major impediment to Kenya's development of a green/circular economy. These recent graduates have a high level of education, enthusiasm, and energy, but they do not have enough opportunities to express themselves and realize their full potential. The study suggests the most sustainable approaches to developing value chains in TVET, as well as various methods for scaling them up. According to the study, addressing the challenges and opportunities in Agriculture TVET institutions is critical for the Kenyan economy to achieve long-term growth and development.



Eyob Esatu, Organization For Innovation and Sustainable Development Africa, Arba Minch, Ethiopia

Policy Drivers for Transforming Skills Development, Entrepreneurship and Sustainable Employability of TVET Graduates in Africa

Research paper

Thematic area: Entrepreneurship, Lifelong Learning, Gig Economy

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Africa is experiencing significant demographic changes, with regional players increasingly influencing geopolitical and international economic affairs. Youth and fresh graduate unemployment is a critical issue across all African countries, with over 20% of youth unemployed. Addressing unemployment among younger demographics is essential to drive growth and prevent instability. Transforming skills development and entrepreneurship for the sustainable employability of Technical and Vocational Education and Training (TVET) graduates in Africa is vital for tackling unemployment and promoting economic growth.

The study identified key policy drivers for this transformation:

- *Integration of Digital Skills in TVET: Emphasizing digital literacy and advanced technological skills in TVET curricula to prepare graduates for the evolving job market.*
- *Public-Private Partnerships: Encouraging collaborations between governments, the private sector, and educational institutions to align training programs with industry needs.*
- *Entrepreneurship Education: Incorporating entrepreneurship training into TVET programs to equip students with the skills needed to start and manage their own businesses upon graduation, reducing dependence on public job markets.*
- *Inclusive Policies: Developing policies that promote gender equality and inclusion of marginalized groups in TVET programs, empowering communities from early childhood education to talent development.*
- *Sustainable Practices: Integrating green skills and sustainable practices into TVET to prepare graduates for jobs in the green economy and climate resilience innovations.*
- *Continuous Professional Development: Providing opportunities for continuous learning and professional development to keep skills updated with market demands.*
- *Quality Assurance: Implementing robust quality assurance mechanisms to ensure the relevance and quality of TVET programs.*
- *Innovation Incubation: Adapting accelerators and innovation incubation programs within TVET education ecosystems.*
- *Autonomy of TVET Institutions: Formalizing the autonomy of TVET institutions from political influence, with clear curricula and regularized industry-TVET linkages, including adequate internships and apprenticeships.*
- *Innovative TVET Funding: Leveraging resources from private sector actors for innovative financing of TVET innovations and special talents focused on problem-solving during policy implementation.*
- *Exit Examinations: Implementing exit examinations as part of quality assurance and relevance assessment to establish a demand-driven TVET system in Africa, expanding networks like UNESCO Chairs for broader reach.*

These drivers can create a more dynamic and responsive TVET system that supports sustainable employability and entrepreneurship among graduates in Africa. The researcher recommends that African technical higher institutions adapt TVET policies supported by the country's labor force demands, based on lifelong skills development philosophy, and mobilize the community of practice through a new social contract for cooperation, fostering a renewed TVET ecosystem in Africa.



Gerishom Wafula Manase, Marren Omondi, Shamberere Technical Training Institute, Kenya, Kenya

Influence of Green Human Resources Management Practices on Greening TVET. A Case of Shamberere Technical Training Institute

Research paper

Thematic area: Greening/Sustainability/Climate Change

<https://afritvet.org/index.php/Afritvet/article/view/79/93>

Green management has never been this important in the past as is now seen in the inspired, empowered and green aware employees. Greening TVET requires the cooperation of the top skilled management employees along with programmes that have a great significant on the management. The need for the integration of greening into TVET personnel cannot be over emphasized. The paper wanted to establish the how Green Human Resources Management if Practiced can affect greening in Shamberere Technical Training Institute (STTI).

Green personnel theories and models were used to show the importance of green personnel concerns that will impact on greening and to understand the unique features of personnel managers, decisions and behaviours which are central to green personnel. The study specifically looked at the effects of selected Green Human Resources Management Practices and how they influence the overall greening TVET institutions.

The study employed a descriptive research design specifically for a case study of STTI . The target population was 100 employees of STTI from which a census of 100 employees was used. The data was gathered using a questionnaire as the research instrument, and descriptive and inferential analysis was used to analyze data. This was presented using frequency distribution tables and figures.

The respondents' indicated that job application at STTI was not in any way based on green issues (mean 2.31, disagreed 52.5%). Greening was not adequately included in performance management and appraisal systems (mean 3.31). There were advantages of adhering to performance management system in green/greening goals (mean 3.93). The institute empowers and encourages the employees to make suggestions and contributions on environmental improvement (46.3%). Many respondents were aware of Greening and National Environmental Management Authority policies and regulations compared to Green Personnel. Given the limited number of responds, further research is necessary to verify the results. To develop staff for greening and management, widespread use of environmental training, developing greening based knowledge and developing greening managers and future leaders should be applied in the TVET system.



Gezani Given Makaringe, University of Johannesburg, Gauteng, South Africa

Exploring the Intersection of Inclusion, Gender, and Migration in Education: Challenges and Strategies for Equitable Learning Environment

Written article; Research paper

Thematic area: Inclusion, Gender, Migration

Contact researcher via email to receive article: Gezanigiven8@gmail.com

In my research and professional experience, I have focused on promoting inclusive education, particularly for marginalized groups such as learners with intellectual disabilities. My work on inclusion aims to ensure that all learners, regardless of their abilities, are given equal opportunities to access quality education in supportive environments. By addressing gaps in comprehensive sexuality education (CSE) for learners with disabilities, I advocate for the right to inclusive education for every individual.

On the topic of gender, I have explored the intersection of education and gender equity, examining how societal norms and biases affect access to education for girls and young women. By fostering gender-sensitive teaching practices, I contribute to creating more equitable learning spaces that challenge traditional gender roles and empower female learners.

In migration, I recognize the unique challenges faced by migrant learners and their families, particularly in terms of language barriers, cultural integration, and access to education. I work towards developing inclusive strategies that help migrant students overcome these obstacles, ensuring their smooth transition into new educational systems while maintaining their cultural identity.

My contribution lies in integrating these key areas—Inclusion, Gender, and Migration—into the broader discourse on education, advocating for policies and practices that create equitable and supportive learning environments for all.



Grace A. Titi Otieno, Maren Omondi, Nancy Oloo, Kenya School of TVET, Nairobi, Kenya

Holistic Skills Development for Self-employment Among the Youth: A Situation Analysis and Future Outlook of TVET Training in Kenya

Research paper

Thematic area: Resilience; Career Guidance, Support Service, Well-being

<https://rb.gv/46lqdi>

TVET training has increasingly become an important provider of relevant hands-on skills for industrial needs. Practically-enhanced skills can address challenges such as improvements in quality, performance and efficiency of programme delivery in TVET institutions. The formal curricula adopted in these institutions are regulated from a national point of view with the aim of providing a generally agreeable curriculum. However, these training programmes sometimes do not take into consideration their reasonableness to potential beneficiaries and their employers. The programme focuses on skills acquisition, the employer's needs, and the curriculum's relevance. Tracer strategies of the graduates are not put in place, the expectations of the employer are different from the trainee qualifications, the need to create entrepreneurial skills and competencies, and strong public and private sector partnerships have not been addressed. Therefore, holistic, hands-on skills training based on competency-based approaches (CBET) and Education 5.0 are essential for self-employment among TVET trainees in Kenya and other parts of Africa.

The research established, and documented the relevance of holistic, hands-on skills to industry needs, determined and compared SDGs integration and skills for self-employment of TVET trainees, recommended the establishment of an operational network with researchers, industry and counterpart service providers and determined dimensions and variables relating to the development of a framework for holistic hands-on Skills for the future outlook of TVET training in Kenya. The research would inform policymakers on the review and implementation of TVET education and training to address social, economic and individual needs country-wide.



GRACE APONDI TITI, SABATIA TECHNICAL AND VOCATIONAL COLLEGE, Kakameg, Kenya

Scoping Survey for Zero waste - A Strategy for TVET Institutions

Written article

Thematic area: Greening/Sustainability/Climate Change

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The Scoping Survey Report on Zero Waste Initiative for TVET Institutions presents a comprehensive overview of the current landscape, challenges, and opportunities related to zero waste initiatives. This survey aimed to gather insights from various stakeholders among TVET institutions within Commonwealth Countries in Africa and Asia Pacific. The survey assessed the state of waste management and practices and identified critical areas for improvement.



Hans Awude, Accra, Ghana

Understanding the demand for and supply of skills in the oil and gas industry in Ghana: A case study of what TVET institutions offer and what exploration and production oil and gas companies need

Research paper

Thematic area: Other, Understanding the relationship between TVET institutions as providers and oil and gas companies in Ghana

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It is important for policy makers and researchers to understand the complexities of skills demand of the Ghanaian oil and gas companies and those supplied by TVET institutions within a TVET system that is small and weak and that has structural inconsistencies.

The paper presents the key findings from a study that analyses the relationship between mid-level technical skills providers and the demand of core technical jobs in Ghana's oil and gas exploration and production companies. The literature identifies middle-level occupations as core technical skill occupations in high demand by the Ghanaian oil companies. However, the literature further argues that the oil companies have concerns about the quality of TVET education and cannot readily recruit qualified graduates from the local labour market. It further highlights a perceived skills mismatch between TVET qualifications and the core technical skills required by industry.

Data were collected from three key role-players: exploration and production oil and gas companies, TVET providers, and regulatory and intermediary bodies. The data collected were supported with a desktop review. The study adopted a descriptive design and systematic descriptive analysis because these methods are well-suited to answering the research questions.

The findings of the study show that while there is a widespread perception of a skills mismatch, more important is a structural dislocation that policy reforms have not addressed to date, despite efforts to do so, making it impossible for TVET providers to supply skilled workers to the oil and gas industry.



Henry Nyamogosa & Michael Murimi, Kisumu, Kenya

Organizational support on integration of communication technology in classroom learning in Kisumu National Polytechnic, Kenya

Research paper

Thematic area: Digitalization, Artificial Intelligence, Innovation

<https://doi.org/10.37284/eajit.7.1.2016>

The study aimed to investigate effects of organizational support on the integration of communication technology in classroom learning at Kisumu National Polytechnic. In particular, the study aimed at determining the influence of training of trainers, stakeholder involvement, and resource availability on the integration of communication technology in classroom learning. The study employed a quantitative approach and correlational design and sampled 169 of the 301 trainers from KNP for study.

The study utilized a simple random sampling technique to obtain a sample size. A self-administered questionnaire was used to collect data. Descriptive statistics and correlational analysis were utilized to analyze the collected data. The study found that training of trainers, stakeholders' involvement, and availability of resources influenced the integration of communication technology in classroom learning with training of trainers and stakeholders' involvement registering average means of above 3.0 and availability of resources registering average mean of 2.8. At the 5% significant level, the results revealed a strong positive correlation between teacher training ($r = .423$, $p\text{-value} = 0.05$), stakeholders involvement ($r = 0.461^$, $p\text{-value} = 0.02$); resource availability and integration of Technology communication in classroom learning ($r = 0.347^*$, $p\text{-value} = 0.03$).*

The study therefore rejected the null hypothesis as there was an existing strong positive relationship between factors of organizational support and integration of technology communication in classroom learning KNP. The study findings provide vivid insights and recommendation to the management regarding the need to involve stakeholders, train trainers and avail resources in integrating communication technology in the classroom.



James Keevy, JET Education Services, Johannesburg, South Africa

A framework to guide selection of skills recognition approaches to facilitate refugees' and asylum seekers' access to labour markets in Africa

Research paper

Thematic area: Inclusion, Gender, Migration

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Skill-recognition mechanisms can promote refugee communities' access to middle- or higher-skilled occupations (ILO 2020). Limited availability of such mechanisms results in the neglect of refugee and asylum seekers' skills and prior learning experiences, leaving them unemployed, or under-employed and/or vulnerable to exploitation by employers for cheaper labour.

This paper based on research in Ethiopia, Kenya and South Africa specifically explores skills recognition methodologies for application in migrant and refugee contexts as a vehicle through which skills recognition as a concept and as a practice that can be introduced in local labour markets. This approach is based on applying three forms of skills recognition and recognition of prior learning (RPL) according to the local level of advancement in recognition processes; (1) conducting RPL, (2) analysing occupational profiles, or (3) developing occupational profiles.

Our paper will offer a rationale for how the hermeneutic framework could support policy makers, stakeholders and implementing agencies' decisions about the appropriate approaches/interventions to aid refugees and asylum seekers access the labour market.



Job Omwega Nyabuto, SIALA TECHNICAL TRAINING INSTITUTE, Kenya

Challenges facing TVET dual training in Kenya. A case study in Kisii, Nyamira and Migori counties
Research paper

Thematic area: Entrepreneurship, Lifelong Learning, Gig Economy

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Dual TVET is an approach of training that takes place both at the training Institution (TVET) and the industry in the specific trade area at the ratio of 50 to 50. This model improves employability of trainees compared to those who pursue courses with conventional approach of delivery. The dual approach of training has been supported by GIZ as one of the development partners in Kenya. Trainees are exposed to the new technologies and emerging trends in their trade area as well as enjoying professional mentorship from the in-company trainer. It enables trainees to use equipment that perhaps the institutes do not have. The trainees would then provide cheaper labor when they have acclimatized with the working industry.

Through the programme the skill mismatch between the industry and the training TTIs will be minimized something that the GIZ is championing in Kenya since 2019. The research intends to identify industry-based factors, TTI based factors and Learner centered factors affecting implementation of the approach in TVETS within Kisii, Migori and Nyamira counties.

The research would propose recommendations that would promote implementation of Dual TVET programs with Minimum impediments. Quantitative research methodology would be used in this research. Purposive sampling for selection of institutions. Data collection will be done through use of questionnaires. Data collected would be analyzed using Statistical Package for the Social Sciences (SPSS) and presented using bar graphs and pie charts.



Joseph Mwangi Wamuga, Nakuru Training Institute - TVET Kenya, Nakuru, Kenya

Adoption of eLearning in Private TVET institutes in Nakuru County, Kenya

Research paper

Thematic area: Digitalization, Artificial Intelligence, Innovation;

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This study examined the integration of digital learning platforms within technical and vocational education and training (TVET) centers. The study investigates the factors influencing eLearning adoption, the readiness of institutions, and the adoption of eLearning in 27 institutions in Nakuru County Kenya.

Key findings include:

- *Institutional Readiness: Many institutions show interest in eLearning, but a significant gap exists in infrastructure, such as reliable internet access, inadequate skills, and technical support.*
- *Challenges: Major obstacles include the cost of technology, lack of trained instructors in eLearning platforms, and limited government support for private TVET institutions.*
- *Benefits: Despite these challenges, eLearning offers flexibility, increased access to resources, and the potential to bridge skills gaps by aligning with industry needs.*

The paper concluded by recommending investment in digital infrastructure and training to enhance the effectiveness of eLearning in these institutions. It also highlights the need for public-private partnerships to drive the adoption of technology in education, and for the operationalization of the TVET funding board envisaged to support TVETs in Kenya.



Julia Olesen, Ralf Hermann, Federal Institute for Vocational Education and Training Germany (BIBB), German Office for International Cooperation in VET (GOVET at BIBB), Bonn, Germany

Formal—Informal—In-Between: Policy Approaches to Informal Learning and Recognition of Prior Learning in South Africa and Ghana

Written article

Thematic area: Recognition of prior learning, informal learning;

https://link.springer.com/chapter/10.1007/978-3-658-44341-2_12

The term recognition of prior learning (RPL) appears to be a hinge between system development which is by definition emphasising structure, standards and formality on the one hand, and the reality of ‘informal learning’ practices on the other hand. This paper reflects the strategic national approaches to informal learning in technical vocational education and training (TVET) in South Africa and Ghana, as well as further approaches in Sub-Saharan Africa.

While South Africa has mature policy framework for recognition of prior learning and Ghana just recently introduced this system, both policies aim to deliver significant socio-economic benefits to young people, the economy and society as a whole. Their RPL policy development is inherently linked to the formal National Qualifications Frameworks (NQFs), and to outcome-based education which is the paradigm underlying much of the policy formulation in South Africa and Ghana. While the vision and motivation behind the policies of the two countries are ambitious, their effects have been limited so far. The small number of RPL candidates in both countries makes it difficult to analyse private sector acceptance.



Komani Augustine Tembo, TEVET Authority, Lilongwe, Malawi

Upscaling informal apprenticeship TEVET skills for inclusive wealth and job creation in Africa
Research paper

Thematic area: Inclusion, Gender, Migration

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This paper advocates upscaling informal apprenticeship TEVET skills for inclusive wealth and job creation in Malawi with an application to Africa. Each year, a considerable percentage of young people either drop out of school or fail to pass examinations to proceed to the next level. Such young people, youth do not qualify to access TEVET in formal training programs (marginalized) due to lack of education qualifications entry requirements.

The main study was conducted in northern Malawi under the title 'Determinants of youth unemployment in agribusiness employment opportunities.' A phenomenological qualitative design was employed to generate in-depth information. The sample frame comprised youth agribusiness clubs from the district agribusiness offices. Purposive and snowball sampling were used to recruit participants doing different agribusinesses. Photovoice, focus group discussions, and oral interviews were used to generate data, which was analyzed using content, discourse, and thematic approaches.

The study revealed that background factors such as age, education, and skill levels were some of the factors explaining youth unemployment. The study recommended that the government and other stakeholders pay extra attention to school dropouts and those who fail examinations for a more inclusive wealth through informal TEVET skills towards Africa 2063.



Labani Kanyonga, Arusha Technical College, Arusha, Tanzania

Students' levels of Scientific Inquiry Competencies: The case of the Laboratory Science and Technology program in Technical Education and Training Institutions in Tanzania

Research paper

Thematic area: Entrepreneurship, Lifelong Learning, Gig Economy

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Previous studies have revealed the profound benefits of fostering students' Scientific Inquiry Competencies (SICs) in science learning as among the 21st century competencies embedded in critical thinking and problem-solving skills. However, it is not clear whether there is explicit assessment of students' levels of these competencies in teaching and learning science and whether students acquire the required levels of SICs in Technical Education and Training Institutions (TET) in Tanzania.

This study assessed students' levels of SICs in TET institutions in Tanzania. A post-positivist paradigm and a cross-sectional survey design were adopted. A proportionate sampling technique was used to draw 337 Laboratory Science and Technology (LST) program students from five TET institutions in Tanzania. Data was collected using SICs tests and analysed by descriptive statistics. The findings revealed that LST students performed slightly above average in the overall SICs ($M = 34.79/55$, $SD = 5.24$), equivalent to 63.25%. However, students have great variation in their level of SICs ($SD = 5.24$). The findings further showed that LST students did better in drawing scientific conclusions ($M = 8.17/11$, $SD = 1.68$), which is 74.27% and in analysing and interpreting data ($M = 7.80/11$, $SD = 1.83$), which is 70.91%. They did just above average in formulating scientific questions ($M = 7.54/11$, $SD = 1.44$), which is 68.55% and in formulating hypotheses ($M = 7.08/11$, $SD = 1.58$), which is 63.36%. However, they performed below average in planning and designing scientific experiments ($M = 4.20/11$, $SD = 1.96$), which is 38.18%.

Therefore, it is concluded that LST students demonstrated promising understanding in drawing scientific conclusions and analysing and interpreting data, limited understanding of the overall SICs, formulating scientific questions and hypotheses, and little understanding of planning and designing scientific experiments. Instructors should effectively support students while performing laboratory experiments to improve their levels of SICs in TET institutions in Tanzania.



Leanzs Mahangilu Ligale, Kenya School of TVET, Kenya

Unpacking the Bloom's Taxonomy of cognitive learning: Developing a new taxonomy framework for competence acquisition in the cognitive domain for teaching technical business courses.

Research paper

Thematic area: Resilience

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The paper demystifies that competence is constricted to acquisition of skills while overlooking the role of knowledge competence as a building block for promoting skills acquisition. Specifically, the paper proposes a new taxonomy for developing knowledge competence with regards to training technical business courses in TVET.



Letitia Jentel, South African Institute of International Affairs (SAIIA), South Africa

The South African Green Hydrogen TVET Ecosystem Just Transition Strategic Framework
Research paper

Thematic area: Greening/Sustainability/Climate Change; Digitalization, Artificial Intelligence, Innovation; Career Guidance, Support Service, Well-being; Entrepreneurship, Lifelong Learning, Gig Economy; Inclusion, Gender, Migration; Resilience

<https://saiia.org.za/project/south-africa-uk-pact-green-hydrogen-economy-project/>

This project aims to improve job absorption in the future Green Hydrogen Economy in pursuit of a Just Energy Transition as South Africa seeks to reduce its carbon emissions. In addition it supports the orientation of South Africa's TVET college ecosystem towards the Green Hydrogen Economy (GHE) by providing insight on sectors with the highest economic and employment potential, and the timelines by which South African graduates will be required to have the requisite skills, as well as options for up- or re-skilling.

The South African Green Hydrogen TVET Ecosystem Just Transition Strategic Framework study, has been co-developed by the South African Institute of International Affairs (SAIIA) and project consortium partners, alongside the Department of Science and Innovation (DSI) and other government stakeholders. The study applies advanced and economy-wide modelling of national energy systems, including hydrogen use, and their economic and GHG emission impact. Policy recommendations and strategic actions toward developing the desired GHE-TVET ecosystem are also put forth, targeted at various public and private stakeholders.



Letitia Jentel, South African Institute of International Affairs (SAIIA), South Africa

Training in Uncertainty: Skills Foresight for a Just Green Hydrogen Transition

Research paper

Thematic area: Greening/Sustainability/Climate Change; Inclusion, Gender, Migration; Digitalization, Artificial Intelligence, Innovation; Career Guidance, Support Service, Well-being; Resilience

<https://saiia.org.za/research/training-in-uncertainty-skills-foresight-for-a-just-green-hydrogen-transition/>

Persistent mismatches between technical vocational skills and industry needs pose a significant challenge in establishing South Africa's local green hydrogen economy (GHE), which depends on a workforce with mid-level renewable energy-related skills. Drawing on successful implementations in countries such as Russia, Brazil and Finland, integrating skills foresight approaches can address these challenges effectively. Embedding skills foresight as a complementary approach throughout the South African skills development system is imperative. By employing a participatory futures approach and conducting a strategic foresight-informed three-day workshop, two policy dialogues and several interviews with government officials and experts, the research identified four priority areas. These are: strengthening skills anticipation systems, enhancing technical vocational education and training (TVET) sector responsiveness, developing transversal skills and fostering a renewed education-related social compact.

Recommendations include integrating skills foresight into skills plans, providing skills foresight and anticipation training for decision makers, using strategic foresight to enhance credentialing systems and initiating participatory futures dialogues for building a new educational social compact. The research emphasises the urgent need for skills foresight integration to address industry–training mismatches. By adopting futures thinking strategies and engaging stakeholders, South Africa can better prepare its workforce for the demands of the GHE and transform its post-school education and training (PSET) system.



Letitia Jentel, South African Institute of International Affairs (SAIIA), South Africa

Skills Governance and the TVET Ecosystem: Pioneering Systemic Innovations for the Emerging Green Hydrogen Economy

Research paper

Thematic area: Greening/Sustainability/Climate Change; Digitalization, Artificial Intelligence, Innovation; Inclusion, Gender, Migration; Entrepreneurship, Lifelong Learning, Gig Economy; Resilience; Career Guidance, Support Service, Well-being;

<https://saiia.org.za/research/skills-governance-and-the-tvet-ecosystem-pioneering-systemic-innovations-for-the-emerging-green-hydrogen-economy/>

In South Africa's evolving workforce, Technical and Vocational Education and Training (TVET) plays a pivotal role in addressing challenges such as inequality, climate change and unemployment. The government aims to train 30 000 artisans by 2030 to meet industrial needs while combatting unemployment. Green hydrogen (GH2), highlighted in government plans, shows promise in the energy transition. Understanding TVET–industry linkages is crucial, focusing on skills governance to anticipate skill needs and plan accordingly. Economic wellbeing, beyond job attainment, is pivotal. A shift from a jobs-centric to holistic education is pivotal, including dignified work, household care, viable environmental ecosystems and state infrastructural support. This shift fosters whole-person and societal wellbeing for local and planetary flourishing.

To enhance TVET, the funding strategy should move towards dynamic education models aligning with a wellbeing economy. TVET's role in the GH2 economy demands innovation beyond traditional models. Challenges such as land dynamics and energy democracy necessitate a progressive approach. Universal Basic Dividends (UBD) emerge as a tool to promote skills development and environmental protection. Collaborative efforts are vital, with the Presidency, the Department of Higher Education and Training (DHET) and Treasury leading this transformative journey. Through a just energy transition, South Africa can pioneer inclusive economic models while harnessing the potential of the GH2 economy.



Lotz-Sisitka HB, Kulundu I, Neville R, James A, Moyo AB, Kunkwenzu E, Morione D, Mphepo G, Velepini K, Maqwelane L, Dyantyi P, Mushishi R, Makwita SA, Musariri Y, Mhlanga Z, JET Education Services/UNESCO Regional Office for Southern Africa (ROSA)/Global Challenge Research Fund's Transforming Education for Sustainable Futures Project (South African node)/Open Society Foundations (OSF), SADC

Education for sustainable development and COVID-19 in southern Africa: Intersecting perspectives on why water, food and livelihoods matter in transforming education for sustainable futures. Research report in the JET Education Services/UNESCO Regional Off
Research paper

Thematic area: Greening/Sustainability/Climate Change

https://unevoc.unesco.org/pub/sadc_theme_1_education_for_sustainable_development_-_final_.pdf

The report draws heavily on the voices and qualitative perspectives of southern African students, teachers, young people, government officials and other citizens affected by the COVID-19 pandemic during early lockdown circumstances in seven southern African countries (generated mainly between April and July 2020). It also draws on literature offering depth perspective on the concerns and builds on 35 years and more of coming to understand the relationship between education and sustainable futures in southern Africa. It makes the point that current conditions and challenges are not ahistorical – they have long histories that shape the present. At the centre of this work is deepening understanding of the relationships that exists between ESD, educational quality and relevance, and building transformative, transgressive learning approaches for building capability and collective agency for sustainable futures in southern Africa. Decades of work in southern Africa have shown that there is an ongoing need to foreground transforming education systems to enable sustainable futures for southern Africa and her people.

The report responds to the need to contribute to the generation of evidence on how education and training systems in SADC were affected by and could respond to COVID-19. The report covered six themes and

- *Provided researchers with an opportunity to contribute meaningfully to shaping solutions to pressures being placed on education systems using an evidence-based approach*
- *Allowed for real-time inputs to be made into other national education processes led by organisations in SADC and*
- *Ensured that a wider group of younger researchers (below 35 years) was collectively engaged during the lockdown period, while giving them an opportunity to grow as they worked under the guidance of experienced researchers*



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Greening TVET: An Imperative to Nigeria's Energy Crisis for Sustainable Economic Recovery and Development

Research paper

Thematic area: Greening/Sustainability/Climate Change

https://www.researchgate.net/publication/328450634_Greening_TVET_An_Imperative_to_Nigeria's_Energy_Crisis_for_Sustainable_Economic_Recovery_and_Development

Energy plays a vital role in economic growth and development as well as poverty eradication and security. Nigeria as a nation is blessed with abundant renewable and non-renewable energy sources and resources. In spite of Nigeria's enormous energy resources available, the country still experiences acute energy shortage as a result of lack of access to modern energy sources or have to cope with inadequate energy supply and of poor quality as a result of the country's inability to meet up with its energy needs, leaving the populace coping with untold hardship. Exploring alternative energy resources and sources is paramount to curtail the energy deficiencies through greening technology in the available field of TVET for sustainable development and green economy.

The paper explores the effective green technology products, their efficiencies and contribution towards green economy with greening TVET for better energy utilisation and consumption as a systemic response to the changing job opportunities and skills needs that a green development agenda brings about.

The paper recommends among others that the Federal and State tertiary institutions should ensure the TVET curriculum is combined with elements of green economic sustainability to promote economic growth and development. TVET in line with environmental and energy regulating bodies should work in harmony towards drafting policy guidelines, standards of operation and projects that are environmentally friendly and cost effective.

The effectiveness of online webinars towards the increase of digital competence for youth self employment.

Research paper

Thematic area: Digitalization, Artificial Intelligence, Innovation

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Our world is undergoing a profound digital transformation (Organization for Economic Co-operation and Development [OECD], which stimulates youth digital competences in fostering self-employment and entrepreneurial success. Online webinars are pedagogical tools in equipping youth with essential digital competences for self-employment, it is through seminars or other presentations that takes place on the internet, allowing participants in different locations to see and hear the presenter, ask questions, and sometimes answer polls. Digital competences are the driving forces for innovative, inclusive and sustainable growth through innovations and digitalization which in turn stimulate job creation, alleviate poverty, reducing inequality, facilitating the delivery of goods and services. Despite the potential benefits of webinars, little research has been done, Therefore, this study was guided with general objective to assess the Effectiveness of Online Webinars towards the increase of youth digital competencies for self-employment, specifically the study attempted to identify digital competences, to find out the impacts of online webinars and to explain the challenges of online webinars.

The descriptive type of designing was employed whereby simple random and purposive sampling technique was used to select 120 respondents whereby questionnaires, interview and documentary review were used to collect the information. The qualitative and quantitative data were analyzed through SPSS The findings show that, the digital competences are categorized into three namely: basic digital competences (i.e. creating professional online profiles, word processing, using keyboards and touch-screens, managing privacy settings, emails), intermediate digital competences (i.e. desktop publishing, digital graphic design, digital marketing) and advanced digital competences (i.e. big data, artificial intelligence, digital entrepreneurship, cybersecurity, internet of things, virtual reality) Also, the study reveals the impacts of online webinars which are knowledge enhancement, skills development, personal growth and network opportunities, moreover the study explain the challenges of online webinars such as technical issues, time zone differences ,content delivery, privacy and security limited networking opportunities It was concluded that online webinars should focus on the specific skills needed in the digital economy such as digital marketing, coding graphic design and e commerce management. The study recommends online webinars have proven to be an effective strategy in enhancing youth digital competence for self-employment.



Marwa Ahmed, Cairo University | Schneider Electric Foundation, Cairo, Egypt

Gender strategy in the energy transition: Empowering women through education and entrepreneurship

Research paper

Thematic area: Entrepreneurship, Lifelong Learning, Gig Economy; Greening/Sustainability/Climate Change; Inclusion, Gender, Migration

<https://www.se.com/ww/en/insights/sustainability/impact-company/gender-strategy-in-the-energy-transition.jsp>

This white paper delves into Schneider Electric's Youth Education & Entrepreneurship program, which aims to empower women in the energy sector and foster gender equality.

Three core missions guide Schneider Electric and its foundation's efforts: Mission I addresses gender-based barriers, advocating for awareness, dismantling stereotypes, and offering tailored training programs for sustainable employment. Mission II equips women with the skills needed to thrive in a rapidly changing world, emphasizing STEM education and energy transition-related expertise. Mission III highlights the role of innovation in driving a sustainable energy transition and focuses on creating an ecosystem that nurtures entrepreneurship.

This white paper highlights the global energy trends from a gender lens and underscores that the transition to sustainable energy requires equitable participation, leadership, and decision-making by women and girls.



Matteo Sgarzi, CEREQ, Marseille, France

"Learning from and through work", an alternative route to qualification

Research paper

Thematic area: Career Guidance, Support Service, Well-being; Inclusion, Gender, Migration;
Recognition of Prior Learning

<https://www.cereq.fr/en/learning-and-through-work-alternative-route-qualification>

A good number of young people leave the education system without qualifications. For most of them, coming as they often do from disadvantaged areas, from areas on the periphery of towns and cities or from rural areas, access to the formal education and training system cannot be taken for granted. For them, "learning from and through work" may represent an alternative. Drawing on a study carried out in Argentina, France, Morocco and Senegal in the construction and public works sector, this edition of Céreq Bref focuses on the conditions that encourage the development and recognition of skills acquired from and through work.



Mbogo Evance Otieno, Kisii National Polytechnic, Kisii, Kenya

Impacts of technical courses on trainee innovativeness in Technical Training Institute in Nakuru County, Kenya

Research paper

Thematic area: Digitalization, Artificial Intelligence, Innovation

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Kenya invests in technical training for youth in Nakuru's booming economy. The goal is to equip learners with skills for innovation, self-employment and adapting existing technologies. This proposal will outline how research investigate the link between TVET courses and trainee innovativeness in Nakuru county, kenya. functional, behavioral, cognitive and technical skills will be applied. Social learning theory will emphasize how trainers and peers can influence trainee innovativeness.

The research will use a descriptive survey design to collect data through questionnaires and interviews. Sample of 385 trainees will be used. Ethical considerations will be obtained by getting consent from participants and ensures confidentiality of their information.



Mojalefa Daniel Maluka, University of South Africa, Pretoria, South Africa

The Effects of Professional Occupational Competence Deficiencies on the TVET Lecturers: A Case Study

Research paper

Thematic area: TVET lecturer competence development

<https://publisher.uthm.edu.my/ojs/index.php/JTET/article/view/14528/6483>

This study utilises Wenger's theory of social learning to explore the impact of professional occupational competence deficiencies on TVET lecturers at selected public colleges in Gauteng Province, South Africa.

This study aimed to explore the effects of professional occupational competence deficiencies on the TVET lecturers across selected TVET colleges in the Gauteng Province, South Africa. Central to the challenge of lecturers professional occupational competence deficiencies is the lack of training and development to capacitate them with the necessary knowledge and skills to ensure that they play their roles optimally in providing students with quality education.

The findings of this study show that due to professional occupational competence deficiencies, TVET lecturers are experiencing profound challenges such as low self-efficacy, self-regulation failure, low motivation, anger, and resentment towards college management. To improve TVET lecturers' competence, efforts need to be made to focus on teaching professional occupational competencies as a priority. This study outlines the challenges that professional occupational competence deficiencies pose for the TVET sector and, by implication, the national development imperatives of South Africa.



Mwamba Mutale, TEVETA - ZAMBIA, Zambia

Participation in Technical Education, Vocational and Entrepreneurship Training in Zambia: are there Gender Differences?

Research paper

Thematic area: Inclusion, Gender, Migration

https://www.researchgate.net/publication/363942935_Participation_in_Technical_Education_Vocational_and_Entrepreneurship_Training_in_Zambia_Are_there_Gender_Differences?_sg%5B0%5D=JNNKjd4eTY5VbXeWu2GMe7t-6ehr0nmQThm6NZEjXgVZNESk1gaLnu5IVSbQ3VleVmIqiTdl9IxM

The 5th Sustainable Development Goal focuses on gender equality, which is to ensure no disfranchisement from participating in socio-economic activities based on their sex. In Zambia, the majority of learners in Technical Education, Vocational and Entrepreneurship Training registered institutions in highly technical programmes are mostly male. A number of women are denied the chance to achieve their potential in mostly male programmes due to societal stereotypes, lack of requisite school qualifications or self-intimidation. Some scholarship incentives have tried to encourage more women participation in mostly male training programmes but the uptake is not very high. However, there are socio-economic returns that accrue workplaces and women for participating in male dominated sectors.

This paper seeks to assess the gender differences in the participation of students in mostly male programmes in Technical Training. The main concern was that highly technical programmes have lower female enrolment and participation. A descriptive survey design was employed in this study and data analysed using descriptive (tables and charts), and inferential (Mann-Whitney U-test) statistics. The findings showed that 26.3 % of the total student population was female, while only 15.1% of females were enrolled in mostly male programmes. This study could contribute to the body of knowledge on gender studies in technical training, and guide policy on interventions of increasing gender equity, and open and distance learning.



Nancy Oloo, Kenya School of TVET, Nairobi, Kenya

Assessment of technology acceptance and adoption among TVET institutions amidst COVID-19
Research paper

Thematic area: Digitalization, Artificial Intelligence, Innovation

<https://shorturl.at/dF6Ge>

Technical and Vocational Education and Training (TVET) provide technical and vocational skills to meet the national human resource requirements in different sectors. In the recent past, there has been an increasing concern on training and learning methods that could be employed in TVET institutions amidst COVID 19 pandemic. As a result, TVET institutions in Kenya have been experimenting with e-learning to provide trainees with the necessary skills amidst the challenges. However, acceptance and adoption of technology-enabled learning are yet to reach the equivalence of the TVET sector. Therefore, the purpose of this study was to examine the implications of Technology Acceptance, Adoption, and Sustainability among TVET Trainers. The study's objectives were to explore the strategies employed in technology acceptance and adoption and establish the importance of technology in addressing the gap for 21st-century skills needs of TVET Institutions. In addition, the study focused on management's adaptability to learning approaches, including learning delivery alternatives, leveraging deep roots within communities, and expanding online learning.

COVID 19 was used as a dependent variable in the study. The study adopted an exploratory research design. The target population included conveniently sampled Deputy Principals, Registrars, Heads of Department, and Trainers from public TVET institutions that are established, registered, and have running programs accredited by TVETA. Primary data were collected using questionnaires. A total of thirty-seven out of 61 institutions were interviewed. The collected data were analyzed and interpreted using the analysis of variance. The study revealed a relationship between technology acceptance, adoption, and online training in TVET Institutions. The findings further indicated that learning resource strategy and relevance of learning resources are the factors that affect the delivery of learning programs in most TVET institutions. The study recommends that guidelines and approaches toward technology-enabled learning be developed; institutions should invest in infrastructure and technology to support working remotely. Learning institutions should embrace virtual learning platforms as a feasible emerging mode of delivery in the wake of the Covid-19 Pandemic.



NURA JIBRIN, Kaduna Polytechnic, Kaduna, Nigeria

Review: Fabrication and testing of solar-powered water pump for irrigation farmers in Nigeria
Research paper

Thematic area: Greening/Sustainability/Climate Change

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This literature review explores the fabrication and testing of solar-powered water pumps for irrigation, with a focus on Nigeria. It highlights the benefits of solar-powered pumps over traditional diesel-powered systems, including reduced operational costs and environmental impact. However, challenges such as high upfront costs, limited technical expertise, and maintenance issues hinder widespread adoption.

Despite these barriers, Nigeria's abundant solar energy and government incentives present opportunities for expanding solar-powered irrigation. Field studies show that these systems improve crop yields and reduce costs for farmers. The review concludes with recommendations to enhance adoption, including government subsidies, local manufacturing, and training programs for technicians, emphasizing the potential for solar-powered pumps to boost sustainable farming in Nigeria.



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Policy imperatives for the implementation of Technical and Vocational Education and Training as Entrepreneurship Education in Nigeria's general secondary schooling system

Research paper

Thematic area: Entrepreneurship, Lifelong Learning, Gig Economy

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Policies are important sub-structure on which curricula development and the anticipated learning outcomes are based. Yet, a good number of studies on Entrepreneurship Education in Nigeria have neglected its analysis but rather focus extensively on curricula development and implementation issues. This study thus answered the question: what are the nation's considerations for EE at the senior secondary school level as contained in two relevant policy documents namely National Policy on Education (NPE) (FRN, 2013) and the Road Map for the Nigerian Education Sector (FME, 2009)?

Findings indicated that there are fairly adequate considerations for the six indices across the policy, programmes and, methods and tools for entrepreneurship education at the senior secondary school level. The study concluded that in spite of the copious provisions for EE in the examined documents, there is the need for government to clarify its intentions in relating EE with trade/vocational subjects.



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Carbon Credit as A Mechanism For Promoting a Green Environment, a case in Thika Technical Training Institute, Kenya

Research paper

Thematic area: Greening/Sustainability/Climate Change

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Global warming is an ever-increasing concern for environmentalists, as the economic costs of climate change continue to rise. In order to combat this issue, policies and businesses are being developed with the aim of protecting the environment. Carbon dioxide is a crucial greenhouse gas that is produced by the burning of fossil fuels and is a primary contributor to global warming. The increasing concentration of carbon (IV) oxide (CO₂) in the atmosphere has become a major source of concern globally. As a result, the carbon credit system was developed to incentivize the reduction of greenhouse gas emissions. The carbon credit market has created opportunities for businesses and governments to trade carbon credits, which represent a reduction in greenhouse gas emissions. The system operates under the Kyoto Protocol, which sets limits on Green House Gas (GHG) emissions and allocates these emissions across countries. This creates a financial incentive for industries and commercial units to reduce their greenhouse gas emissions and thus helps to reduce the impact of global warming.

A general survey research design was used in carrying out the study. Data collection instruments used included, interviews questionnaires, direct observation, photography and library search.

This paper aims to discuss the fundamental concepts and importance of carbon credit as a tool for mitigating global warming. It highlights the various methods used to protect the environment, including the adoption of low-carbon technologies and practices.

The paper also examines the business opportunities in the global carbon emission market in Thika town, which could potentially lead to greening and also mitigate climate change while promoting financing Technical and Vocational Education and Training (TVET).



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Influence of flexible skills development program on sustainable growth in TVET: A case study of THIKA Technical Training Institute

Research paper

Thematic area: Entrepreneurship, Lifelong Learning, Gig Economy

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In the twenty-first century, technological and macroeconomic needs brought about considerable job challenges and new occupations demand new skills, competencies and lifelong learning. Therefore, TVET and FSD systems are called upon to respond to these needs. Flexible Skills Development Program is an imitative in TVET that should respond to lifelong learning for economically active persons. It also necessitates access and quality skills for job creation in the light of the growing size of the youth cohort and the skill gaps created by the growing informal sector. In addition, Technological needs require quality skills for economic development, international competitiveness and knowledge-intensive economic sectors. Further, Workforce skills have undergone a continuous process of adjustment as a result of globalization. Globalization has engendered a rethinking of the nature of both knowledge and skills. TVET systems are expected to produce world-class skills for global competitiveness on the one hand and to link informal economies to formal TVET through the provision of skills that enable people to access decent jobs and better integrate into mainstream economic life on the other hand. It is against this backdrop that the paper will unveil activities, outcomes and achievements of flexible skills development realized in Thika TTI. This is in order to meet needs of 21st century for sustainable development. The data will be collected through questionnaires issued to both lecturers and Flexible Skills Development Champion.

The recommendation is that Flexible Skills development for the formal and informal sector is the key to transforming labour market for sustainable growth.



Pete Read, Persona Education, Bristol, UK

Life Skills for Climate Change

Written article

Thematic area: Greening/Sustainability/Climate Change; Career Guidance, Support Service, Well-being; Resilience

<https://www.persona-life.com/blog/life-skills-for-climate-change/>

Climate change is one of the existential issues of this generation, and concerns about the future can lead to a lot of stress and anxiety. Pete Read, CEO and Co-founder of Persona Education, introduces six Social-Emotional Skills that help young people deal with the realities they are facing and not give up, and equally importantly help them start to understand issues, plan responses and take action.

Education can and should: Empower young people with the skills and knowledge to take action on climate change; amplify student voices and develop their critical, creative and communication skills; inspire learners to solve problems and consider the challenge from global and local perspectives.

Given the situation we are in, both climate action and climate anxiety need to be prioritised. Social-emotional skills that help with understanding climate change issues, and planning responses, include: Processing Information; Critical Thinking; Effective Teamwork. Those which help young people deal with the climate change realities they are facing, and not give up, include: Stress Management; Staying Positive; Perseverance. The article defines these and goes on to provide suggestions on how to start developing each of these six social-emotional Life Skills for climate change resilience among students.



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Continuing education: the new source of job creation opportunities in Madagascar

Research paper

Thematic area: Entrepreneurship, Lifelong Learning, Gig Economy

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Access to the highest levels of education is not a possibility for everyone in society. In Madagascar, for generations, registration or admission to the bachelor's and master's levels have remained privileges only accessible to a very small percentage of society. Obtaining master's and doctoral degrees are, however, signs of success and social advancement. In addition, it is certificates and diplomas that determine values, professional positions and levels of living conditions. But since the advent of new technology, we notice that courses are increasingly democratized on the internet. A new revolution and popular reform is spreading. Courses are increasingly accessible for free, which makes access to theories easier. It is in this perspective that we notice a new trend: that of continuing education entrepreneurship. In Madagascar, people with free access to online theories (and practical experience or not) create course content and recycled capacity building materials into paid or sponsored services. These include mental health courses, entrepreneurship orientations, professional coaching in personal development, etc. Providers offer training without necessarily going through universities or traditional institutions to obtain skills certificates. This method is known in the form of intellectual services, consulting, masterclasses and various workshops, either funded by institutions or paid for by registrations. So, in this context, how does this new work chain manifest itself? What are the gains and disadvantages of this consulting and continuing education business in the labor market in Madagascar?

This research will therefore take stock of this new business and the related social changes. To carry out this research, we will mobilize the theory of determinism and discourse analysis. We will opt for documentary review, observation and interviews of training entrepreneurs, learners, theoretical experts and authorized training institutions.



Rose Muthoni, Wanjiru Njuki, The Nyeri National Polytechnic, Kenya

Enhancing Green Learning and Training in TVET Institutions through Digital Libraries in Nyeri County, Kenya

Research paper

Thematic area: Greening/Sustainability/Climate Change

<https://afritvet.org/index.php/Afritvet/article/view/77>

TVET institutions all over the world and Kenya in particular have experienced low uptake of their courses for a very long time since the youth consider them secondary to university degrees. These institutions need to transform and revitalize themselves for acceptability by youth as a preference for post-secondary education. Green skills are an integral part of vocational competence and are key to sustainable development. Green learning and training in TVET through Competency Based Education and Training (CBET) would attract the attention of the majority youth towards adopting green skills geared to self-sustainability hence contributing towards sustainable development. However, sustainable development is not a fixed concept; rather it is a culturally-directed search for a dynamic balance in the relationships between social, economic and natural systems, a balance that seeks to promote equity between countries, races, social classes and genders.

The objective of the study was to establish how the digital libraries were enhancing green learning and training in TVET institutions in contribution towards sustainable development.

The study employed explorative and descriptive research methodologies and adopted purposive sampling. The target population included all TVET institutions in Nyeri County, Kenya. Data collection and data analysis tools were used for data process and presentation.

The findings of the study were that digital libraries have contributed in enhancing green learning and training in TVET institutions through CBET for sustainable development. The conclusions were that digital libraries had a role to play towards enhancing green learning and training, there were several factors affecting implementation of digital libraries, and digital library implementation had positive effect on green learning and training in TVET institutions. In view of this, implementation of green CBET courses mainly targeting the youth by TVET institutions would go a long way in supporting green economy.

The study recommended that TVET institutions should put in mechanism for implementing digital libraries for green learning and training.



Sarah M. Gilbert, Freiburg, Germany

International Vocational Training Cooperation for Sustainable Development - Analysis of the general conditions in Uganda for cooperation with NGOs

Thesis

Thematic area: Greening/Sustainability/Climate Change

https://www.researchgate.net/publication/354986277_International_Vocational_Training_Cooperation_for_Sustainable_Development_-_Analysis_of_the_general_conditions_in_Uganda_for_cooperation_with_NGOs

This Thesis explores international vocational training cooperation for sustainable development, while having its focus on the framework conditions in Uganda and potentials for cooperation with NGOs. Using a multi-methodical approach, several strands of scientific literature -related to education, vocational training, development cooperation, evaluation and vocational training measures in the global South, primarily Africa- are purposefully brought together. An analysis scheme for framework conditions for Education for Sustainable Development is roughly developed.

On a basis of document analysis and expert interviews, the analysis scheme is illustrated by a Case Study (project cooperation of the German NGO Welthungerhilfe and YES Uganda). With a focus on the Ugandan framework conditions, clearly emerging opportunities for vocational training cooperation for sustainable development are found within the organized Ugandan NGO landscape and in holistic approaches to education and skills development. Challenges involve population growth, the nature of development (and therefore of training needs) as well as various dependencies.

With regards to the Case Study -in the context of the agricultural state with an informal sector- it is noted, that the possibilities of holistic approaches for skills development are strongly used, to create autonomy and independence of the beneficiaries.



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The rate of building information modeling adoption at higher education intuitions in South Africa
Research paper

Thematic area: Digitalization, Artificial Intelligence, Innovation

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Purpose: The outcome of this research aims to support South African universities, with regards to BIM integration within programs at higher education institutions; and to focus on identifying the challenges and highlighting the benefits of adoption of BIM into Architectural, Engineering and Construction education curriculum.

Design: A qualitative research approach was adopted through a systematic literature review and case study research process. NVivo software analysis was conducted to provide a thematic analysis and ensure validity of the research study.

Findings: The salient findings for the study indicate that there is a significant lack of BIM implementation at South African higher education institutions, within AEC curriculums; and research further indicates resistance to the adoption of BIM, in part; due to the lack of BIM support by the government.

Value: The research study provides insight into the state and rate of BIM implementation at South African higher education institutions with respect to AEC curricula and its need to evolve beyond the conventional methods traditionally taught. The study highlights the challenges and overarching benefits of BIM adoption at higher education institutions as well as provides a framework for successful implementation.



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Regional Integration of Technical and Vocational Education and Training in ECOWAS Region

Research paper

Thematic area: Other, Regional Integration

<https://doi.org/10.52403/ijrr.20240648>

This article explores the current status of the TVET system in West African countries and identifies strategies for effective integration within the ECOWAS region.

The study used a mixed-methods research design to investigate regional TVET system integration within ECOWAS. Data was collected from 83 participants randomly selected from Benin, Ghana, Nigeria, Senegal, and Togo. The collected data was analysed using thematic analysis.

The findings show that each member state has a unique TVET system with some crossborder initiatives to collaborate and share best practices. Similarly, the results reveal that the integration of TVET systems faces multifaceted challenges rooted in the socioeconomic fabric of regions and the perception of vocational training. The findings show a lack of coherence and coordination, leading to inconsistencies in training quality, limited resources, and limited mobility of graduates. To address these challenges, there is a need for customized strategies and a concerted effort from policymakers, educators, industry stakeholders, and the community to develop a robust, adaptable, and forward-looking regional TVET system for ECOWAS member states. Therefore, it is imperative to harmonize standards and develop a regionally integrated TVET model so as to improve the quality and relevance of TVET in ECOWAS. This can create a skilled workforce, promote youth employment, and foster the sustainable development of the region, like other regions that have an excellent harmonized and integrated regional TVET system within the region.



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Quality Assurance in West African TVET Institutions: A Brief Literature Review

Research paper

Thematic area: Other: Quality Assurance in TVET

<https://doi.org/10.3126/tvet.v18i1.62741>

The study reviews the role of quality assurance in Technical and Vocational Education and Training (TVET) systems in supporting economic development, enhancing labor market competitiveness, and meeting industry expectations.

The authors use a desk research strategy, focusing on document review and qualitative content analysis to analyze credible reports on the role of quality assurance in TVET to promote competent workforce.

As per findings, quality assurance in TVET institutions is crucial to ensuring that graduates possess the necessary skills and competencies for the workforce, reducing skills gaps and enhancing employability. It aligns TVET programs with industry standards, enabling graduates to contribute effectively to the workforce. Quality assurance mechanisms also enhance the credibility and reputation of TVET institutions, increasing their attractiveness to students and employers. It helps produce highly skilled individuals, contributing to the country's economic development and global competitiveness. However, the TVET sector in West Africa faces several challenges, including inadequate infrastructures, curriculum relevance, teaching and learning quality, limited industry collaboration, and lack of quality assurance mechanisms. To address these issues, the authors suggest some innovative dimensions of quality standards to strengthen and improve quality assurance in TVET institutions. These quality standards include leadership, governance, management, physical environment, human resources, curriculum, student participation, access, equity, career guidance, financial management, program evaluation, research, innovation and development. All of these are interrelated, thereby spurring the overall quality and effectiveness of TVET programs and institutions.



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Perceptions of Apprentices on the Dual Apprenticeship Programme in Benin: A Narrative Inquiry
Research paper

Thematic area: Other, Dual Apprenticeship

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https://www.researchgate.net/publication/381361187_Perceptions_of_Apprentices_on_the_Dual_Apprenticeship_Programme_in_Benin_A_Narrative_Inquiry#fullTextFileContentm

This study explores the perceptions and experiences of apprentices in Benin's dual system, which combines educational instruction and workplace training. Formalized through TVET reforms in 2005, the dual apprenticeship programme admits thousands of apprentices annually. Inspired partly by the Swiss dual VET model, it faces challenges such as insufficient training manuals, tools, and distant training centers, leading some apprentices to drop out. Even graduates struggle with job opportunities.

The study, conducted in Benin, used narrative inquiry to understand apprentices' perceptions and experiences. Due to the COVID-19 pandemic, participants were interviewed online via WhatsApp audio calls. The data was analyzed using expectancy-value and social capital theories. Findings show apprentices choose the programme for various reasons, including passion, economic motives, and promising expectations. They recognize the programme's relevance and opportunities, learning new skills and broadening their social networks. However, challenges include long distances to training centers, lack of training manuals, inadequate monitoring and evaluation, and insufficient financial resources for tools and workshops.

To address these issues, apprentices suggested decentralizing training centers, extending the programme to all craft occupations, strengthening training monitoring and evaluation, providing sufficient training manuals, allowing traditional system-trained master craftsmen to graduate from the dual programme, and organizing periodic skills development programmes for graduates. The study's implications can help policymakers and Benin TVET stakeholders develop a new National Qualification Framework, create a graduates' allowance fund, extend the dual system to other sectors, and recognize the CQP certificate in the formal education system, allowing graduates to pursue further education.



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Exploring the Dual Apprenticeship Programme in Benin Republic: Analyzing Opportunities and Overcoming Challenges

Research paper

Thematic area: Other: Dual Apprenticeship

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<http://dx.doi.org/10.2139/ssrn.4898162>

The purpose of this paper is to explore the current state of Benin's dual apprenticeship program, specifically its opportunities and challenges, as well as potential solutions. Since 2003, the vast majority of Benin young people have been trained on the job in the work techniques of a given trade in the artisan workshop.

This study used a mixed-methods approach to understand the effectiveness, efficiency, and sustainability of Benin's dual apprenticeship program. Primary data was collected through online interviews, with secondary data from government documents, decrees, policies, and project progress reports. The study focused on the cities of Cotonou, Sèmè-Podji, Parakou, and Porto-Novo, with 63 purposefully selected participants. The collected data was analyzed using thematic and content analysis to identify key themes and patterns.

The results show that the dual apprenticeship program provides apprentices with a three-year training program that combines practical experience in artisan workshops with theoretical training at vocational training centers (VTCs). Upon completion, apprentices receive the "Certificat de Qualification Professionnelle" (CQP). However, issues such as outdated entrance or recruitment process, outdated training materials, insufficient student manuals, lack of trainer quality control, and failure to meet basic obligations hinder its success. Similarly, it is noted that the program only includes 13 out of 300 craft occupations, and trainees are placed in VTCs far from their homes. To this end, the program expansion to other crafts and engaging all stakeholders in clearly defined responsibilities will lead to the program effectiveness and sustainability in Benin Republic.