Situational Analysis of Technical Vocational Education and Training (TVET) in SADC Member States

Acknowledgement

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Acronyms

AI	Artificial Intelligence
BQA	Botswana Qualification Authority
CAT	Credit Accumulation and Transfer
CPD	Continuous Professional Development
CPUT	Cape Peninsula University of Technology
CSO	Civil Society Organization
DHET	Department of Higher Education and Training
DIVT	Department of Industry and Vocational Training
ESQF	Eswatini Qualification Framework
EU	European Union
FET	Further Education and Training
HRDC	Human Resource Development Council
ILO	International Labour Organization
LMIS	Labour Market Information System
QAF	Quality Assurance Framework
QF	Qualification Framework
M&E	Monitoring Evaluation
MoU	Memorandum of Understanding
MNQF	Mauritius National Qualification Framework
MS	Member State
NQA	Namibia Qualification Authority
NCHE	National Council of Higher Education
NEDLAC	National Economic Development and Labour Council
NMMU	Nelson Mandela Metropolitan University
NSA	Non-state Actor
RISDP	Regional Indicative Strategic Development Plan
RPL	Recognition of Prior Learning
ROSA	Regional Office of Southern Africa
SAC	Sector Advisory Council
SADC	Southern Africa Development Community
SAQA	South African Qualification Authority
SDGs	Sustainable Development Goals
SETA	Sector Education and Training Authority
TMIS	TVET Management Information System
TVET	Technical Vocational Education and Training
TVETMIS	TVET Management Information System
TEVETA	Technical Entrepreneurial and Vocational Education and Training Authority
UNESCO	United Nations Education and Scientific Organization
ZNQF	Zimbabwe National Qualification Framework
ZQA	Zambia Qualification Framework

Executive Summary

In line with the SADC TVET Strategic Framework and Implementation Plan (2018-2027) and the UNESCO TVET strategy (2016-2021), the SADC Secretariat and UNESCO Regional Office for Southern Africa (ROSA) commissioned a TVET situation analysis study in 10 SADC Member States. The study was commissioned to assess the existing situation of TVET systems in the 10 SADC Member States (9 UNESCO ROSA Member States and Mauritius); and to develop key recommendations that will inform the drafting of the new strategic document reflecting UNESCO ROSA's support for education in the next strategic plan period of 2020-2026. The report is based on the findings from the review of existing literature, stakeholder consultations and feedback as well as Member States presentations during the regional TVET meeting which took place in Malawi in October 2021.

Study findings

State of TVET Monitoring and Evaluation

All the 10 SADC Member States have monitoring and evaluation systems which they are using to track progress and measure the impact of TVET on their economies. However, the M&E systems are not generating adequate data to inform and provide feedback to the entire TVET system. Some Member States like Malawi have not rolled out the Labour Market Information System (LMIS) and TVET Management Information System (TMIS) as tools to help generate data as well as track progress of TVET in the countries.

TVET research capacity

Few TVET research activities are being carried out in the majority of the 10 Member States due to limited research capacity of teachers, limited financial resources and poor research infrastructure amongst the challenges identified. Realizing the existing research gap in the TVET system, several Member States like Malawi, Zambia, Zimbabwe, South Africa, Mauritius have prioritized research in their TVET policies. In Member States like South Africa, Malawi, Mauritius, Botswana and Zimbabwe, the TVET providers are collaborating with universities and institutions of higher learning to carry out collaborative research.

Articulation arrangements and pathways of the Education System

Despite the establishment of the National Qualification Frameworks in the majority of the Member States, there are still some challenges with the articulation pathways. There are continued and persistent challenges for a TVET graduate to join university education system. In Member States such as South Africa, Mauritius, Zimbabwe, Botswana, Namibia, the government has established platforms to allow TVET stakeholders to discuss and iron out the challenges related to articulation arrangements and pathways in their respective education system.

Equity and inclusion

Enrolment rates of girls and special needs youths in TVET are low despite Member States putting in place policies and strategies to promote and increase access to girls and special needs youths in the TVET sector. Some of the strategies include the provision of scholarships and bursaries to girls and special needs students, use of female ambassadors as promoters of TVET (Ngwazi zazikazi in Malawi), organization of TVET days and weeks and TVET career guidance talks in schools. Civil society organizations and other non-state actors have a crucial role to play to influence Member

States to fast track implementation of the affirmative policies and strategies on equity and inclusion.

Systematic TVET reform

Over the past 20 years, Member States have developed and enacted policies and laws to improve the performance of the TVET systems. Some of the reforms include establishment of National Qualification Authorities and NQF, establishment of Quality Assurance Bodies and frameworks. Even though the systematic reforms are taking place in the TVET sector, the financial and capital investments in TVET are inadequate to allow for effective implementation of such reforms.

Recommendations
Strengthen monitoring and evaluation of TVET systems in some SADC Member States. In most of the 10 SADC Member States, data capturing and reporting systems on TVET are limited and weak. Some Member States such as Malawi, Zambia, Eswatini, Lesotho, Mozambique have not yet rolled out their Labour Market Information Systems (LMIS). The Member States labor markets cannot function efficiently and effectively without quality information to support the investment decisions of the workforce development system. There is need therefore to strengthen data capturing and reporting systems in order to ensure that quality labour market information is collected and analyzed to inform decisions for the improvement of the TVET systems in the Member States.

Build TVET research capacity in the SADC Member States
Ideally policy makers are expected to make evidence based decisions during policy making. Some of the key decision required include broader investments in TVET, articulation arrangements and pathways with the education system, strengthened practice orientation of TVET, increased networking of TVET providers with the industry. As such, Member States therefore need to develop robust research agenda and strategies to generate evidence to inform TVET policy and policy decision making.

Strengthen and promote TVET articulation arrangements and pathways with education
There is need to have coherent and meaningful articulation arrangements and pathways of the education system in the SADC Member States where strong coordination within and between the different components are framed for the benefit of the students. According to Blom (2013), the ideal is to have the ease of movement and progression, as well as flexible approaches to access and credit transfer, to enhance efficiency and mobility within the system. Good examples exist in Australia and America where the systems of articulation make it clear that policy and models are not enough but need to also be based on discussions and negotiations between partner organizations (TVET providers and the Universities).

In order to deal with articulation challenges in the SADC Member States, there is need to establish deliberate mechanisms at national level to allow for dialogue between the institutions of higher learning (Universities) and TVET providers on the articulation arrangements and pathways.

Mainstream gender equality and inclusion issues in TVET
Access to TVET by girls and special needs youth in the SADC Member States is low. A number of strategies have been put in place by the Member States to promote equity and inclusion in TVET

such as special bursaries and scholarships for girls and special needs students, media promotions through print, television, e-based platforms targeting girls and special needs students. There is need therefore for Member States to mainstream gender aspects and gender equality issues within their national policies as well as continue implementing targeted support for vulnerable groups. There is need also for the Member States to establish platforms and mechanisms to promote improved access of female youths and disadvantaged youth to TVET.

Provide adequate resources for the implementation of TVET reforms
Though the SADC Member States are implementing various policy and legal reforms in order to improve the performance of the TVET systems, the implementation of such reforms is slow. The insufficient financing of the TVET sector compared to other areas of education acts as a barrier to the implementation of reforms.

Build capacity for increased uptake and use of new learning technologies
TVET systems in the region have embraced the use of new learning technologies such as e-learning. However, the adoption of new learning technologies such as e-learning is facing some resistance amongst some instructors and teachers. Some of the challenges emanate from the limited e-learning skills amongst the instructors and teachers. This is also compounded by the fact that most of the TVET courses are practical in nature hence requiring physical contact between the learners and the teachers. The attitude of lecturers and resistance to change are other factors affecting adoption of new learning technologies in the TVET sector.

More investment in capacity building of teachers, teaching and learning materials and technology infrastructure is required in order to improve and increase the uptake and use of new technologies in the TVET sector.

Promote TVET as career path and lifelong learning for all
TVET in the SADC Member States continue to have a poor public image amongst the youths and parents. One key informant in Malawi propounded that TVET is commonly viewed to be *"a route for those who have failed and cannot manage to survive in the academic setting."* The perception of TVET as a segment of education designed for dropouts or academically poor individuals is predominant in most of the 10 SADC Member States. More advocacy work, publicity of TVET amongst parents, pupils as well as increased engagement between the TVET institutions and secondary schools will help to promote TVET as a career path in the SADC.

1.0 Introduction

A quick assessment of the SADC 2012-2016 Strategic Framework and Programme of Action for TVET revealed that most of the planned strategies and actions were not fully implemented for a number of reasons including lack of human and financial capacity at MS level and the absence of M&E mechanisms for proper monitoring. The main objective of the ensuing Strategic Framework and Implementation Plan 2018-2027 relates to contributing to the implementation of the SADC Industrialization Strategy through skills development. The Strategic Framework has four intermediate objectives as summarized in Box 1

Aligned to the SADC Strategic Framework and Programme of Action for Technical and Vocational Education and Training. UNESCO-ROSA developed the Strategy for Technical and Vocational Education and Training (TVET) (2016-2021). The strategy aimed to support the efforts of Member States to enhance the relevance of their TVET systems and to equip adults with skills required for employment, decent work, entrepreneurship and lifelong learning; and contribute to the implementation of the 2030 Agenda for Sustainable Development. Agenda 2030 calls for an integrated approach to development which recognizes

> **Box 1. Intermediate objectives of the SADC Implementation Framework and Plan for the development of TVET in the SADC**
> - To provide adequate and relevant skills for industry competitiveness.
> - To contribute to the enhancement of mobility of skilled persons in SADC.
> - To increase access to skills programmes for Women, Youth, Persons with Disabilities, and Vulnerable groups in order to ensure their participation in the industrialisation process.
> - To increase the numbers of Women, Youth, Persons with Disabilities, and vulnerable groups in skills development.

that eradicating poverty in all its forms and dimensions; combating inequality within and among countries; preserving the planet; creating inclusive and sustainable economic growth; achieving full and productive employment and decent work for all women and men; and ensuring full gender equality and fostering social inclusion, are interdependent. The strategy contributes towards achievement of Sustainable Development Goal 4 which focuses on "Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all". Education 2030 devotes considerable attention to technical and vocational skills development, specifically regarding access to affordable quality Technical and Vocational Education and Training (TVET); the acquisition of technical and vocational skills for employment, decent work and entrepreneurship; the elimination of gender disparity and ensuring access for the vulnerable.

Both the SADC Strategic Framework and Implementation Plan for the Development of TVET in SADC (2018-2027) and the UNESCO-ROSA Strategy for TVET (2016-2021) are aligned to the Regional Indicative Strategic Development Plan (RISDP) 2020-2030 and SADC Vision 2050. Since the delineation of the above-mentioned Strategic Plans, SADC Secretariat and UNESCO ROSA have embarked on a number of initiative geared towards implementing the measures enunciated under the Strategic Plans. These include for instance: capacity building workshops to foster sharing of best practices and on green skills and a review of the SADC M&E Framework accompanying the SADC TVET Implementation Plan. In order to delineate future course of actions, it was deemed imperative that Secretariat embarks on an analysis of the current status of TVET intricacies in the region.

It is in light of the above that SADC Secretariat, in collaboration with UNESCO ROSA commissioned a study to assess the Technical and Vocational Education and Training (TVET) situation in the 10 SADC Member States (Eswatini, Lesotho, Botswana, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe and Mauritius). As aforementioned, the study aims to provide baseline information on the status of TVET in the SADC Member States in order to provide information which would potentially guide future actions and implementation of the of the SADC Strategic Framework and Implementation Plan for the Development of TVET in the SADC (2018-2027).

1.2 Objectives and scope of the assignment
The main objectives of the study include the following:
- To undertake a situational analysis of TVET systems in the ten Member States (9 ROSA Member States and Mauritius)
- To develop key recommendations that will provide information which would potentially guide future actions to be taken within the scope of the SADC Plan 2018-2027

1.3 Scope of the assignment
The study was commissioned to specifically assess the following:
- Status of Monitoring and Evaluation of TVET and Research capacity within the Region.
- Articulation arrangements and pathways of the Education system with MS TVET Systems.
- Staff Development Initiatives for TVET trainers/lecturers/instructors and Institutional Development at Member States level:
- Linkage of TVET with Labour Market: Existence of National Platforms of engagement between academia, industry, government, and innovators; availability of apprenticeship programmes and work-based learning initiatives and their modus operandi.
- Emerging TVET practices, new innovations, skills being implemented in Member States and being supported by policy environment to ensure sustainability.
- Extent to which Member States address and implement equity issues as per the SADC Industrialization Strategy.
- Promotion of TVET as a career path, and for the creation of employment, retooling, entrepreneurship development and life-long learning for All.
- Systemic Reforms including:
  - Articulation of TVET Education in National Qualifications Framework.
  - Existence of Quality Assurance Frameworks or Rubrics for the TVET sector.
  - TVET Policy Coherence since part of the challenge of managing TVET is that it is inherently a cross-sectoral issue rather than falling under the purview of only one governmental department.
- Existing mechanisms for funding TVET in each member state
- Level of uptake and use of New Learning Technologies in the TVET Sector; and
- Measures adopted by MS TVET stakeholders to mitigate the impact of Covid-19 to ensure continuity of learning.

1.4 Limitation of the study
Due to the COVID pandemic, the consultants could not conduct face to interviews in all the 10 Member States. However, the regional meeting that was organized from the 26th to the 27th of

October 2021 in Lilongwe provided an opportunity for the representatives from the Member States to engage with the consultants on the status of TVET in their respective Member States. The relative short time span provided for the assignment also impacted on the stakeholder consultation process.

2.0 Approach and Methodology
In order to achieve the objectives of the assignment, a number of research approaches and methods were used including review of relevant documents and stakeholder consultations.

2.1 Review of relevant documents
An internet search of relevant documents was carried out where a collection of TVET related policies, legislations and reports from the global and 10 SADC Member States were downloaded. Some of the documents were obtained through email from the UNESCO ROSA and SADC Secretariat. In addition, the two consultants obtained several hard copies of other TVET related documents from the Member States such as Malawi and Botswana where the two consultants are based. Some of the documents reviewed included the TVET policies and legislations; TVET project reports; TVET related publications; TVET regional and global strategies, evaluation reports just to mention a few.

2.2 Stakeholder consultations
Due to the Covid 19 pandemic and the associated movement restrictions, the consultant could only carry limited consultations with stakeholders in the 10 SADC Member States. Those contacted include senior government officials, UNESCO contact points, TVET providers and the industry. Face to face interviews were conducted with selected stakeholders in two countries (Botswana and Malawi) where the consultants are based. In addition, virtual meetings were organized for stakeholder consultations.

The research team designed a special data and information collection tool to guide discussion during the stakeholder consultations. The data collection tool contained key questions related to the focus areas of the study. The findings from the literature review and stakeholder consultations informed the development of the draft situation analysis report which was presented during the Regional TVET Stakeholder meeting that took place between 27-29 October 2021 at Ufulu Garden Hotels in Lilongwe, Malawi. The report was further informed by the reports from the Member States which were presented during the Regional TVET meeting in Malawi. Member States were asked to prepare a report of the TVET situation in their Member States as part of the preparation for the Regional TVET meeting. Apart from validating the findings of the situation analysis report, the presentations by Member States during the TVET regional meeting in Malawi helped to provide country specific data and information on the TVET situation in the SADC Member States. The draft report was also presented during the UNESCO-SADC Futures of Education: Development of the TVET and Higher Education Strategic Framework meeting at Radisson Blue Hotel in Cape Town South Africa on 15-16 November 2021. The meeting provided a platform for the TVET situation analysis report to be discussed and allow heads of higher learning institutions such as University Vice Chancellors in the SADC to provide feedback on the draft TVET situation analysis findings.

3.0 Findings of the Study

3.1 Status of Monitoring and Evaluation of TVET in the Region
Stakeholders from the Member States agree that education and training for productive employment is vital for economic and social development in the SADC Region. Technical and Vocational Education and Training (TVET) is viewed as a vehicle for productivity enhancement and poverty reduction in the region. Increasing the performance of education systems in the region in terms of access, efficiency, equity and quality is reliant upon information-based decision-making derived from an effective system of monitoring and evaluation, budgeting and planning, policy research and analysis. However, the information gathered reveals that TVET monitoring and evaluation systems in SADC Member States are at different stages of development and that the MS have different levels of capacity to manage the monitoring and evaluation functions of TVET. Participation of stakeholders such as the industry in the TVET monitoring and evaluation process is assured through the sector committees as is the case for Botswana, Malawi, Zambia, South Africa, Zimbabwe Namibia and Mauritius. Annual and biannual performance monitoring reports are produced in some countries like South Africa, Mauritius, Namibia, Zimbabwe, Zambia and Botswana with the reports being shared with all the relevant stakeholders. The Member States also revealed that they have several mechanisms for tracking progress of the TVET sector and some of these are summarized in table 1 below.

Table 1. Status of Monitoring and Evaluation of TVET in the Region

Country	Existing mechanisms for monitoring and evaluating	Responsibility for M&E
Botswana	• Monitoring and Evaluation (M&E) tool under the Education and Training Sector Strategic Plan (ETSSP), the HRDC TVET Pitso, and draft M& E Framework for the draft National TVET Policy. • Biannual HRDC TVET Pitso	• Human Resource Development Council (HRDC) in Botswana provides oversight through sector committees TVET sector • Business Botswana TVET Sector • Department of Skills Development • Department of Teacher Training and Technical Education
Eswatini	• Quarterly performance reports	• Parliament, • Industry involved only on monitoring informal TVET
Malawi	• TEVET M&E framework for the Industry exist • TEVET M&E framework for the new policy exist	• Industry responsible for tracking TEVET in the industry • Department of Technical and Vocational Training
Mozambique	• Strategic Plan for Vocational Education 2018-2024 has the M&E framework and plans	• State Secretariat for Technical Education • Ministry responsible for higher education

	• Semi-annual and annual reports of the Economic and Social Plan (PES); Balance Sheet, Budget Execution Reports (BEOs)	
Namibia	• M&E system exist • Biannual progress reports • Progress tracking based on the TVET policy	• Ministry of Higher Education, Technology and Innovation through the relevant agencies and intuitions.
South Africa	• Monitoring and Evaluation Framework of the Post-School Education and Training System • Monitoring and Evaluation Framework for TVET College Performance, including monitoring of Performance Indicators • Monitoring and Evaluation of Curriculum Delivery in TVET Colleges exist • Annual Reports from various stakeholders e.g. – Annual Performance Plan	• Department of Higher Education and Training (DHET) • TVET Branch, individual Directorates (M&E, Governance, Student Development and Support, Curriculum Development and Support, Lecturer Development and Support, Financial Planning and Coordination, etc • Teaching and Learning Plans (TLPs), Standard Operating Procedures, etc.; • Regional Managers and TVET Colleges • South African • Public Colleges Organisation (SACPO)
Zambia	• Periodic monitoring and reporting of quality assurance of TVET institutions • Periodic monitoring and reporting of implementation of TVET programmes funded through the Skills Development by the Skills Development Fund management • Periodic monitoring and reporting of TVET implementation	• TEVETA • Owners of TVET Institutions • Skills Development Fund
Zimbabwe	• M&E system exist	• Ministry of Manpower Planning and Development • Higher Education Examinations Council

Source: Country presentations during the regional TVET meeting. Lilongwe, 26-27 October 2021

The biggest challenge in many SADC Member States is the availing of relevant and reliable data which may be used for informed policy formulation and decisions. Member States agree that more often, the monitoring and evaluation function of TVET systems are poorly funded, are poorly manned and not prioritized.

3.2 TVET Research capacity within the SADC Region

According to Haßler et.al (2020) TVET research in Sub-Saharan Africa is not systematic and not always of high quality. The key challenges to TVET research relate to the development of TVET institutions, the promotion and growth of TVET staff numbers, the improvement of the image and perception of TVET and the importance of ICT in TVET. Lauglo (2006), conclude that a key element in TVET development is to provide feedback emanating from the labour market to the TVET Sector, in order to ensure that the sector responds to market demand for skilled work. It is also important to note that any country where policy makers are considering the need for radical restructuring of TVET, the need for policy making to be informed by research cannot be overemphasized. Research assists the TVET sector to develop and maintain a system that is capable of promoting innovations, development of new technologies, enhancing productivity in organizations and operationalizing an effective TVET Management Information Systems. Lack of proper statistics and empirical research severely hampers evidence-based policy making and efficient use of scarce resources. This is evidenced by the low adoption and application of appropriate technology in the TVET sector; lack of an integrated management information system; weak linkages among research institutions, training provider institutions and industry; and the lack of creativity and innovation in the sector in many of the SADC Member States. Apart from South Africa, most of the SADC Member States do not have national TVET research strategies (Table 2). However sectoral research strategies and plans exist but their implementation is uncoordinated. It is expected that the situation is going to change since the majority of the Member States have developed TVET policies in which research has been prioritized as one of the key policy focus areas. Prioritizing TVET research in the national policies means that the Member States will be able to allocate financial resources in the national budgets to enable the responsible institutions carry out research activities.

Stakeholders, during the TVET regional workshop in Malawi, agreed that the capacity to carry out research exist in the Member States. However, research capacity at TVET provider level is weaker when compared to the higher education level (University level). This is due to a number of factors including limited financial resources, lower quality of human resources and limited availability of infrastructures. The Universities in the Member States have research budgets, the capacity of their members of staff is high and infrastructure for research is available. Very often TVET colleges do not have adequate financial and human resources to carry out much needed research activities.

Table 2. TVET Research capacity within the SADC Region

Country	TVET research strategy and plans	Responsibility for research
Botswana	• No TVET research strategy and plans	• Public and Private tertiary institutions (University of Botswana, Botswana International University of Science and Technology) research not focused on TVET • Botswana Innovation Hub (BIH), • BOTHO University and Francistown College of

		Technical and Vocational Education (FCTVE)
		• Newly established Botswana Research Education Network (BotsREN
Eswatini	• No TVET strategy and plans	• TVET Directorate
Lesotho	• No strategy on TVET research	• Universities of Lesotho (research not related to TVET)
Malawi	• No TVET research strategy	• Malawi Polytechnic
Mauritius	• TVET research strategy and plans available	• University of Mauritius • Incubation Centers
Mozambique	• No TVET strategy	• Universities (research of academic research)
Namibia	• Strategy on TVET research available	• Namibia University of Science and technology • Center of Excellence • Namibia Incubation centers
South Africa	• DHET Research Agenda • DHET Research Plan (includes Five Year Research Programme on TVET, other TVET research projects/ evaluations, Tracer studies/Destination studies, Statistical reports and analysis and User satisfaction surveys) • Research, M&E initiatives are available • Research is presented and disseminated through Research bulletins, Journals on TVET - JOVACET Colloquia/workshops/summits/round tables/conferences, etc • Research takes place through Ministerial task teams/reviews. It is also conducted by DHET entities (https://www.dhet.gov.za/Pages/Current-and-Planned-Research.aspx)	• Department of Higher Education and Training (DHET) • National Skills Fund NSF), National Skills Authority (NSA), other DHET entities including SETAs, National Student Financial Aid Scheme (NSFAS) and SAQA. • Most universities have research units that conduct research, including research on TVET (for example: Institute for Post-School Studies (IPSS), Neil Aggett Labour Studies Unit (NALSU) etc). • There are a number of private and public research organisations that conduct research on TVET for example, Mzabalazo Advisory Services, Swiss-South African Cooperation Initiative (SSACI), Health, Human Sciences Research

		Council (HSRC), SAMRC etc
		• The Eastern Cape Research Round table is a consortium led by a TVET college. They often lead or partner with other institutions in TVET research endeavors, including webinars.
		• PhD and Master Students also produce research on TVET.
Zambia	• No strategy and plans on TEVET research	• University of Zambia
Zimbabwe	• Bi-Annual TVET Research Symposium	• Polytechnics in Zimbabwe carry out research

Source: Country presentations during the regional TVET meeting. Lilongwe, 26-27 October 2021

3.3 Articulation arrangements and pathways of the Education system with TVET Systems
According to SAQA (2017), articulation is currently understood in at least three ways.

- First, articulation can be understood broadly, as 'systemic articulation' or 'joined up' qualifications and various other elements aligned to and supporting, learning pathways. Systemic articulation is based on legislation and the steering mechanisms available to the state, such as planning and funding in the education and training system.
- 'Specific articulation' is based on the formal and informal agreements within the system for education and training – between institutions – as guided by policies, accreditation principles, and mechanisms like Credit Accumulation and Transfer (CAT) or Memoranda of Understanding (MoU).

- Third, articulation exists through the addressing of boundary-making practices and the support of boundary-crossing practices as individuals encounter 'boundary zones' between the different elements of learning pathways, and adopt 'boundary-crossing practices' in their transitioning along their pathways.

> Box 1 Articulation arrangements and pathways in Botswana
>
> *In Botswana the National Credit Qualifications Framework (NCQF) provides a framework for Education Training Providers (ETPs) to develop their programmes according to levels with clear articulation. Basic Education levels 1-4, Skills Development in MELSD at level 5 which is certificate, and Ministry of Tertiary, Research, Science and Technology (MoTE) at level 6 which is a Diploma. The Framework provides opportunity for learners to choose qualifications and career paths according to their ability. Consultations on multiple pathways between MELSD MOBE and MOTE have been intensified for optimum utilization of resources which is currently being implemented under the General Education Curriculum and Assessment Framework (GECAF – 6-3-3 Basic Education). Learners will no longer be writing Primary School Leaving Examinations (PSLE) but be able to choose their career path after standard 6 basing on the skills and competencies developed, acquired and mastered.*

Articulation with academic education, whether at school or higher education levels, is not well developed and poor in most of the 10 SADC Member States. The study established that most of the Member States have TVET subjects in primary and in some secondary schools. However, pathways of education system with TVET system are not clear.

It is not possible to move from one system to another. For example, in Malawi it is difficult for a TVET graduate to join university education. In Eswatini there is the National Curriculum Framework which has pathways but so far implementation of the framework has not been galvanized as articulated in the framework. The development of the National Qualification Frameworks by most of the SADC Member States is seen as a solution to the articulation challenges learners are facing with articulation arrangement and pathways of the education system. However, in countries such as Namibia and Malawi, the National Qualification Frameworks have not been approved by government and challenges still exist which continue to affect articulation arrangements and pathways in the education.

It is important to note that young people need to be allowed to make choices about their educational and occupational paths as early as possible and that education systems should avoid locking them into particular routes. In this regard, it is interesting to note that the SADC Member States are aworking to better integrate academic and vocational education into more flexible systems even though progress is slow (SAQA, 2017). This is also seen as a way of tackling the problem of low esteem for vocational education. However, most countries in the SADC are silent on possibilities of horizontal articulation with academic schooling. The challenge with learnerships is that TVET qualifications are not primarily designed with a view to progression to higher levels but with a focus on the competencies required for a specific occupation or set of occupations. This typically means that TVET graduates have a far poorer fit of prior formal learning for higher education programmes than do academic school graduates.

Table 3 summarizes the various legislations and policies that Member States have put in place to support development and operationalization of NQF. In 2011, the SADC Ministers of Education established the SADC Qualification Framework (SADCQF) which is a comprehensive Regional Qualifications Framework (RQF) for schooling, Technical and Vocational Education and Training

Box 2 Articulation in South Africa education and training

In South Africa, Cape Peninsula University of technology (CPUT) has agreements with five FET colleges in the region. Areas of cooperation include: direct articulation for college students to access programmes at CPUT; bridging programmes; upgrading of lecturer qualifications; Recognition of Prior Learning (RPL) for the FET college sector; partnerships aimed at improved retention and throughput rates at NQF level 5; curriculum analysis and development; and, career guidance (HESA 2012). On successful completion, students are accepted into the various Engineering programmes offered at CPUT. DUT also collaborates with a number of FET colleges in the Kwazulu Natal region. Some of these agreements allow direct entry into access programmes on the basis of passes in Mathematics and Science, while others give credit for certain subjects already passed. Furthermore, students offering the National Certificate (Vocational) 6 can progress directly into diploma programmes (HESA 2012). The Nelson Mandela Metropolitan University (NMMU) has mapped college learning programmes against cognate qualifications in vocational fields of study such as Engineering, ICT, Finance and Accounting, Management, Marketing and Tourism. Detailed curriculum analyses in some of these fields also aid articulation. While articulation between these two sub-sectors seem to be underway, it is clear that in other areas special arrangements need to be devised, for example: The Engineering Faculty at CPUT turns away approximately 2000 applicants every year. Many of this group meet minimum admission requirements, but are displaced by students with higher NSC scores. Ideally these students could have been referred to the FET college to complete the final year of the NC(V) 4. However, articulation from the academically-focused NSC to the vocationally-focused NC(V) remains problematic. Hence there is a need for a purpose designed access programme which focuses on developing competencies in Mathematics, Science and Engineering Drawing (emphasis added) (HESA 2012: p. 13).

The Nelson Mandela Metropolitan University (NMMU) mapped college learning programmes against cognate qualifications in vocational fields of study such as Engineering, ICT, Finance and Accounting, Management, Marketing and Tourism. Detailed curriculum analyses in some of these fields also aid articulation.

While articulation is underway is some subsectors, in other areas special arrangements need to be devised, for example: The Engineering Faculty at CPUT turns away approximately 2000 applicants every year. Many of this group meet minimum admission requirements, but are displaced by students with higher NSC scores. Ideally these students could have been referred to the FET college to complete the final year of the NC(V) 4. However, articulation from the academically-focused NSC to the vocationally-focused NC(V) remains problematic. Hence there is a need for a purpose designed access programme which focuses on developing competencies in Mathematics, Science and Engineering Drawing (emphasis added) (HESA 2012: p. 13). In addition, SAQA has done - 2018 Report on Articulation between TVET Colleges and Higher Education Institutions. The DHET is planning to work with SAQA and the three quality councils to develop an enabling environment for a well-articulated PSET system. This includes the revision of the policy environment, work with institutions to ensure that programmes have clear articulation pathways, and that the public is informed of articulation pathways and options. The Department, SAQA and the three quality councils will work together to ensure that qualifications have built-in articulation possibilities and are communicated to the public. On an annual basis, the Department will provide progress reports on the implementation of articulation in the PSET system, as well as policy brief (Source: Revised Strategic Plan 2020-2025)

Source: Blom R., (2013) Articulation in the South African Education and Training System. Doi: 10.13140/RG.2.2.21748.14720

learners and workers across the SADC region and internationally. It is a 10-level RQF underpinned by learning outcomes and quality assurance (QA) principles that will provide a regional benchmark for qualifications and QA mechanisms in the SADC.

More recently all the UNESCO ROSA Member States plus Mauritius have put in place policies and legal framework supportive of the development and implementation of the NQFs (table 3).

Table 3. National legislations supportive of NQFs in the SADC Region

Member State	National Legislations supporting NQF	Observations
Malawi	• TVET Act (1999) Under review • Malawi Qualification Bill (MAQA, 2021) • Education Act (2012) • National Council for Higher Education Act (2011)	• NQF not established awaiting the approval of the Malawi Qualification Bill by Parliament
South Africa	• National Qualifications Framework (NQF) Act, as amended, Act No. 12 of 2019 • Higher Education Act, Act No. 101 of 1997 • South African Qualifications Authority (SAQA) Act No. 58 of 1995 • Continuing Education and Training Act, Act No.16 of 2006) • General and Further Education and Training Quality Assurance Act, Act No. 58 of 2001 • Skills Development Act, • Act No. 97 of 1998	• South African Qualifications Authority (SAQA) established in 1995, whose mandate is to develop and implement the NQF in line with the National Qualifications Framework (NQF) Act
Namibia	• Vocational Education and Training (VET) Act No. 1 (2008) • Education Act No. 16 (2001) • Namibia Qualifications Authority Act No. 29 (1996)	• Namibia Qualifications Authority (NQA) was established under the Namibia Qualification Authority Act. • NQF not yet approved
Eswatini	• Higher Education Act (2013) • Education Act • Industrial and Vocational and Training Act (1982)	• The Eswatini Higher Education Council and Eswatini Qualifications Framework (ESQF) established under the Higher Education Act
Lesotho	• Lesotho Technical and Vocational Training Act (1984) • Education Act (2010)	• Lesotho Qualifications Authority was established and currently

		finalizing the Lesotho Qualification Framework.
Botswana	• Tertiary Education Policy (2008) • Botswana Qualifications Authority Act (2013)	• Botswana Qualifications Authority was established in 2013
Zambia	• Technical Education Vocational and Entrepreneurship Training Authority Act (1998) • Zambia Qualifications Authority Act	• TEVETA Act establishes the Technical Education Vocational and Entrepreneurship Training Authority • Zambia Qualifications Authority (ZQA) was established under the Zambia Qualifications Authority Act
Zimbabwe	• Education Act (amended in 2019 • Manpower Planning and Development Act (2020) • Vision 2030 (2018) • Education Sector Strategic Plan (2016 -2020)	• Manpower Planning and Development Act (2020) establishes a training levy and the National Manpower Advisory Board • The Act also establishes the Zimbabwe National Qualifications Framework
Mozambique	• Vocational Law (2014)	• National Professional Education Authority established to regulate all TVET (1992)
Mauritius	• Apprenticeship Act (1968) • Mauritius Qualifications Authority Act (2001) • Human Resource Development Council Act (2003) • Skills Development Authority Act (2019)	• Mauritius Qualifications Authority established in 2001 • Mauritius Institute of Training and Development (2009)

Source: Country presentations during the regional TVET meeting. Lilongwe, 26-27 October 2021

3.4 TVET Staff Development and Institutional Development

At the center of quality technical and vocational education and training lies an effective interaction between teachers/trainers and learners. An overall improvement in vocational skills for employability and citizenship can only be realized if there is an improvement in the quality, effectiveness and relevance of teaching. It is pleasing to note that all the SADC Member States are increasingly laying emphasis on improving the capacity of technical and vocational education and training (TVET) systems, in recognition of the important role TVET plays in equipping individuals with relevant skills and knowledge for the job market. Stakeholders during the regional TVET in Malawi and considerable progress has been achieved in the capacity development of staff and TVET institutions in the Member States. Some Member

> Box 3. TVET staff development in Zimbabwe
>
> Teacher-education colleges and universities in Zimbabwe are responsible for training future teachers for all education levels. Teacher-education colleges offer two- and three-year programmes depending on previous qualifications. Secondary teacher training colleges fall into two categories: academic and technical. Technical colleges require students to take one academic, one technical and a subject in the theory of education. Universities offer one-year certificates in education which can be acquired after a three-year degree programme (post graduate).
>
> The majority of TVET teachers are untrained and lack appropriate qualifications for their position. Therefore, the Ministry of Education, in collaboration with NGOs, offers in-service teacher training that aims to improve the quality of teaching. In-service training and self-improvement courses are not compulsory but are popular among untrained and trained teachers (UNESCO, 2012).

States such as Malawi, Botswana, Zimbabwe, Namibia have put in place strategies to promote Continuous Professional Development (CPD) of TVET teachers and instructor. The main reason is to strengthen the professional competency of staff within the TVET system to enable a learning environment that makes TVET globally competitive.

With support from development partners such as UNESCO, EU, World Bank, GIZ, ILO and others Member States have implemented a number of capacity building interventions targeting TVET staff and institutions. In some Member States like Malawi, the ministry responsible for TVET have been supported to decentralize the management of the TVET colleges in order to improve the governance and management of the TVET institutions.

Despite these efforts, the TVET systems continue to face multiple capacity challenges. There are concerns that few vocational instructors have a sufficiently strong blend of subject specialist knowledge, industrial experience and pedagogical skills. The delivery of quality TVET is dependent on the competence of the teacher or lecturer in terms of theoretical knowledge, technical and pedagogical skills as well as keeping abreast of new technologies in the work place. The lack of specialized TVET teacher education training institutions in some countries like Malawi compound the challenges that the TVET systems are facing in the Member States.

3.5 Linkage of TVET with Labour Market

Although considerable awareness has been created on the need to make TVET demand-driven, the reality in many SADC Member States shows a TVET system which is predominantly supply

Box 4. TVET linkage with the labour market in Mauritius
In Mauritius, a policy and guidelines for qualification validation has been set up by the MQA to establish a   process of checking and evaluating a qualification against criteria, prior to a decision on whether or not to include it in the Mauritian National Qualifications Framework (NQF). It is a quality assurance process applied to new, revised or amended qualifications and standards to ensure that they have clear and relevant purposes and have been designed to meet these purposes. Consultation with the industry is a key requirement in the process.

driven. The development of non-target skills is a major weakness of the TVET system in the majority of the SADC Member States excluding South Africa and Mauritius. Feedback mechanisms between the labour market and the TVET providers in the majority of the 10 SADC Member States is weak. The TVET monitoring and evaluation systems are not robust enough to be able to provide appropriate feedback for improving the delivery of TVET. Normally TVET providers review their curricula every four to five years. However due to lack of or limited financial resources, TVET providers are not able to review their curricula in the stated period. However, the labour market is dynamic and its requirements are changing every day. The curricula review by TVET providers lags behind the ever changing needs of the labour market.

TVET policies in all the 10 SADC Member States allow and promote the industry and private sector involvement in TVET through various platforms and institutions such as the sector advisory committee or councils, governance structures of TVET providers, apprenticeship and work based learning programmes, and many other platforms (Table 4). The involvement of the industry and private sector in TVET is one way of strengthening the TVET response to the labour market. The industry is involvement in the policy decision processes, governance of TVET, curriculum reviews, apprenticeship, financing of TVET and quality assessment through the Trade Advisory Committee and sectoral advisory committee (in the case of Mauritius).

There are a number of existing platforms that have been established to strengthen linkages between the TVET sector and the labour market. However, these platforms are not fully functional in some countries. For example, the TVET policy in Malawi establishes the Sector Advisory Committees (SACs) which comprise the industry and all the key stakeholders. However, the functionality of the SACs largely depends on the availability of financial resources provided by TEVETA or the government. The limited financial allocation to facilitate SAC meetings and organization of National TVET platforms have contributed to the weakening linkages between TVET and the labour market.

Table 4. Mechanisms for linking TVET with the labour market

Country	Institutions	TVET platforms
Botswana	• HRDC sector committees • Individual college arrangements	• Seminars and workshops • Annual career fairs • Skills market fairs • Road shows

	with specific industries	• Manage national Labour Market Information System (LMIS) and national education and skills development database.
Eswatini	• Directorate of Industrial and Vocational Training	• Apprenticeship programmes
Malawi	• TEVETA • Public Private Skills Development Forum	• Curriculum development • Industrial training through attachments • Provision of training equipment • Building capacity of trainers through attachment.
Mozambique	• State Secretariat for Technical Professional Education	• Curriculum Development meetings • External verification and pre-professional placements • Participation of employers in various management and contribution bodies in PTE (Professional Training and Education) • Funding on the basis of 0.65% of the payroll.
Namibia	• Ministry of Labour • Namibia Training Authority	• Technical skills training through psychometric assessment for TVET and registration of job seekers. • Apprenticeship programmes
South Africa	• National Economic Development and Labour Council (NEDLAC) • Sector Education and Training Authority (SETA) • National Skills Authority (NSA)	• Establishing a dual System model (Adapted from Germany) which integrates College and workplace Training • Creating Centres of Specialisation for various trades • Recognition of Prior Learning
Zambia	• TEVETA • Sector Advisor Groups (Mining, Water etc.)	• TVET stakeholder forums • Public TVET discussion forums
Zimbabwe	• National Manpower Advisory Council • Higher Education Examination Council	• Heritage Based Education 5.0 that has introduced Innovation Hubs and Industrial Parks in provinces • Apprenticeship programmes

Source: Country presentations during the regional TVET meeting. Lilongwe, 26-27 October 2021

3.6 Availability of apprenticeship programmes and work-based learning initiatives
Apprenticeship programmes and work-based learning initiatives (WBL) are available in all the 10 Member States countries. The majority of the Member States have adopted the German duel apprenticeship model which commits both the employer and the training institution to provide

Box 5 Apprenticeship and work-based learning in Zimbabwe
Apprenticeship programmes and work-based learning initiatives exist and are supported by the Government. Formalized apprenticeships are covered by the Manpower Planning and Development Act. They involve a contract between the trainee, the Government and the training company, and are open to secondary school graduates. The curricula, which include one year at a college and three years at the workplace, are developed by the Apprenticeship Board. There has been evidence that these formalized apprenticeships at better resourced institutions produce good quality graduates.

Work-based learning initiatives are common in Zimbabwe, especially through Informal apprenticeships that are not regulated by the state. Informal work based learning provides an opportunity for learners to gain skills in a traditional setting such as a small and micro-enterprise within the informal sector. Apprentices work and learn under the supervision of a master craftsperson for a duration ranging from a few months to three or four years (ILO. 2019).

practical and theoretical training respectively to enable development of necessary skills and knowledge required for a trade. In all the 10 Member States apprenticeship-type schemes and other structured work-based learning programmes are provided within both the formal education system and non-formal education system. For example, in South Africa, the DHET partnered with Capacity Building Programme for Employment Promotion (CBPEP). Both DHET and SETAS carried ou a tracer study of TVET College graduates in 2019.

In the building and construction sectors, a post-secondary work placement or apprenticeship in a company is required before the person can take a trade and or receive a trade certificate. There is usually an agreement between the TVET provider and the industry where TVET apprentices are attached for a period of time before they graduate. During the placement, the TVET providers monitor the performance of the apprentices while the role of the industry or company is to coach and mentor the apprentices during the entire period of his or her attachment to the company. Most of these agreements build on the principle that young people lacking professional experience are offered coaching and training as part of their course.

Some good practices on apprenticeship and work-based learning exist in the region. In Malawi. TEVETA (Technical Vocational Education and Training Authority) is implementing the Formal Apprenticeship Programme which is a modular competence based training delivered through registered TEVET Provider Institutions and industrial attachment. The training programme certification is done at levels 1-4 of achievements, where trainees acquire practical and theoretical knowledge in the occupation of their choice. Work-based learning experiences such as apprenticeships are extremely effective in skill and competency development as they offer the opportunity to learn in real work environment situations. Dual systems, being promoted in Malawi, allow learners to gain theoretical knowledge in the classroom, and put this knowledge into practice in the workplace, through apprenticeships. The dual system promotes lifelong transformative learning.

In order to encourage lifelong transformative learning, TVET institutions in the SADC region need to adopt expansive rather than restrictive apprenticeship models to give appropriate emphasis to learning, reflection and personal development.

3.7 Emerging TVET practices in the SADC Member states

A varied range of practices has emerged during the implementation of TVET activities over the past years (Table 5). Some of the emerging practices in the TVET sector in countries such as South Africa, Zimbabwe, Mauritius, Botswana and Malawi include the establishment of innovation hubs, industrial parks and incubation centers which are promoting creativity, innovation and development of new technologies. The 10 SADC Member States recognize that innovation is a driver of growth and well-being and new technologies, products, services and organizations create jobs and rejuvenate the industries. In order to reap the gains from innovation, policy makers need to understand the way industries are changing and what this implies for education and training policies. According to the innovation profiles of tertiary graduate jobs (OECD, 2014), education is one of the most innovative sectors of society, especially for innovation in knowledge or methods. The COVID 19 pandemic has also led to the introduction of new ways of learning in the education sector including TVET where blended and on line teaching and learning approaches is seen as a way of controlling the spread of the disease.

The study found that almost all the 10 the SADC Member States have embraced ICT based learning and teaching in TVET institutions. The COVID 19 pandemic has contributed to the increased adoption of ICT based learning and teaching approaches. ICT-based instruction has been found to lower the cost of study and has allowed learners to stay in their communities and earn an income while learning or working. ICT based learning is also beneficial to the industry or employer who do not have to deal with apprentices taking leave for mandatory classroom-based instruction. However, ICT based learning is however facing some challenges amongst instructors and teachers. Some of the challenges include the weak ICT capacity of the instructors and their attitude towards the use of e-learning for delivery of their subjects. Participants, during the regional TVET workshop, argued that the use of ICT based learning such as online and e-learning pose a big challenge for effective delivery of TVET subjects which are mostly practical and require physical contact between the learners and the instructors.

Table 5. Emerging TVET practices in the SADC region

Country	Emerging TVET practices
Botswana	• HRDC and BQA are identifying and developing new qualifications and competencies in TVET • Establishment of the Botswana Innovation Hub (an innovative and networked organization that promotes technology, entrepreneurship and commercialization • Promotion of green TVET
Malawi	• Promotion of equity and inclusion in TVET • Decentralized management of public TVET institutions • Introduction of Green TVET • Introduction of entrepreneurship in TVET • Establishment of Incubation centers • Mainstreaming of gender in TVET curriculum
Namibia	• Introduction of entrepreneurship in TVET. • Expansion and elevation of some selected Vocational Training Centers production hubs into Regional Value Chain Centers (RVCC) for some essential products.

South Africa	• Introduction of 4IR technologies, AI, Virtual reality in TVET • Blended and online teaching and learning modalities • Development of the National Skills Strategy to support the South African Economic Reconstruction and Recovery Plan (ERRP) • Development of the National Digital and Future Skills Strategy • The DHET works collaboratively with the Department of Science and Innovation to leverage the innovation service points already in existence nationally, for the enhancement of skills development in TVET colleges. • Initial engagements focus on augmenting and modernizing current provision in TVET colleges through innovation and creativity to prepare students for the world of real work in a 21st century context (Source: 2020-2025 Revised Strategic Plan)
Zambia	• Alternative learning pathways-combination of online teaching and e-learning
Zimbabwe	• Heritage Based Education 5.0 that has introduced Innovation Hubs and Industrial Parks in provinces • Innovation and Industrialization are mandatory pillars of learning for the production of tangible goods and services in TVET institutions. • Introduction of Skills for the Green Economy Programme in partnership with UNESCO, ILO and the Swedish Embassy

Source: Country presentations during the regional TVET meeting. Lilongwe, 26-27 October 2021

3.8 Equity and inclusion in TVET

In line with the SDGs Goals No 4 and 5, all the 10 SADC Member States have established policies, strategies and affirmative actions to promote and ensure adherence to equity and inclusion by all stakeholders in the TVET sector. Though the implementation of such policies and strategies are at different stages, the political will to ensure that education including TVET are accessible to all citizens of the SADC Member States exist. Access to TVET by girls and special needs youths continue to be a major challenge in all the 10 Member States. Some of the challenges affecting access to TVET by these groups of youth relate to limited financial resources, the negative perception that youths and parents have on TVET amongst others The Member States' representatives agree that equality in education implies securing education as a right for all learners and supporting the learners to exploit their full potential and aspirations, regardless of their socio-economic backgrounds. It also involves implementing and institutionalizing interventions and arrangements towards achieving the set goals. SADC Member States subscribe to the UN Girls Education Initiative (UNGEI) which states that inclusion in education refers to the extent to which education service delivery responds to the diversity of needs and learners. During the regional TVET meeting in Malawi, participants agreed that there is need to provide all learners with equal opportunities regardless of their status s in order to prepare them for productive lives as full members of society. Table 6 summarizes some of the tools, approaches and practices which the Member States are employing to achieve equity and inclusion in the TVET sector.

The study found out that all the 10 Member States have introduced special initiatives and programmes in order to promote access to TVET by girls and special need youths. All the 10 Member States like Malawi, Botswana, South Africa, Zambia, Zimbabwe, Mozambique, Namibia are offering TVET scholarships to youths with special needs and girls to study in TVET colleges.

In South Africa, the government has made it an explicit policy consideration that disadvantaged groups are not excluded/discriminated in any teaching and learning environment**. Despite these efforts, there are still structural and economic challenges that are hindering the effective implementation of strategies and policies promoting equity and inclusions in most of the SADC Member States. For example, the majority of the TVET providers have limited teaching and learning materials and facilities for special needs learners. The infrastructure is still unfriendly to the learners.

Table 6 Equity and inclusion tools and approaches in TVET

Country	Tools, Practices and approaches
Botswana	- Botswana has policies that promote equal opportunities for all learners including marginalized groups such as: - National Policy on Affirmative Action; - Inclusive Education Policy and Revised National Disability Strategy 2020 - 2036 - Gaborone Technical College admits students with Special Education Needs (mild intellectual impairment) to access the program - Marapong Brigades has a Special Education Unit which caters for learners with hearing impairment
Eswatini	- Inclusive TVET Policy - Deliberate inclusion policy on the percentage of the marginalised groups (male female, disabilities etc.) to be recruited at work and in training colleges
Lesotho	
Malawi	- Gender mainstreamed TEVET policy - TEVET Bursaries for female students and students with disabilities - Provision of disability equipment and infrastructure for learning and at work places - Provision of disability friendly teaching and learning materials - Mainstreaming of gender in teaching and learning materials - Promotion of equity and inclusion through radio and TV giggles
Mauritius	- TVET scholarships for children from vulnerable groups and with disabilities are available. - Recognition of Prior Learning is also a prominent feature of the TVET system in Mauritius and acts as an inclusion tool.
Mozambique	- Strategic Plan for Vocational Education 2018-2024 - Ministerial Directive on Equity and Inclusions of 2019 - Regulations to Combat Corruption and Sexual Harassment
South Africa	- Department of Higher Education and Training (DHET) has a specialised unit dedicated to Inclusive education issues - With the History of exclusion and segregation, South Africa has made it an explicit policy consideration that disadvantaged groups are not excluded/discriminated in any teaching and learning environments**.

	• DHET has developed the following policies: – Policy Framework for the realisation of social inclusion in the Post–School Education and Training System; – Strategic Disability Policy Framework for the Post-School Education and Training System; and • Policy Framework to address Gender- Based Violence in the Post-School Education and Training system
Zambia	• Inclusive vocational training Policy developed (not yet approved) • Allocation of a bursary targeted at persons with disabilities and those from rural areas. • Mainstreaming gender in the Training materials • Provision of disability friendly TVET infrastructure

Zimbabwe	• Inclusive Greening TVET strategy
	• Mainstreaming of equity and inclusion in the TVET curriculum
	• Use of an Inclusivity Curriculum Development Checklist that checks for usage of:
	   o Gender Sensitive Symbols
	   o Gender sensitive Language
	   o Gender sensitive Case Studies
	   o Explicit reference to Women (him/her) as opposed to usage of neutral language like them

3.9 Promotion of TVET as a career path and life-long learning for All

Jules (2012) said that there are many factors affecting the acceptance of TVET in many developing countries and most of these are legacy issues from their post-colonial inheritance. According to Jules the education systems of many developing countries, place TVET as a "second chance" or "second rate" education. In the 10 SADC Member States the majority of the youth enrolling in TVET programs are seen as academic underachievers. This view reinforces the negative perceptions and low valuation of TVET by the majority of the youths and parents. Stakeholders attending the regional TVET workshop in Malawi revealed that there are varied range of strategies that are been advanced in order to promote TVET in the Member States. Some of the strategies that are being implemented are summarized in Table 7 below.

Table 7. Promotion of TVET as a career path

Country	Strategies
Botswana	• National TVET Pitso by HRDC • Annual Road shows and Career Fairs by HRDC • Exclusive showcase activities by Technical Colleges • Young Africa Botswana market and publicize TVET through a campaign called "Making TVET Cool"
Eswatini	• Government introduced Pre-Vocational Education in schools to ensure that students gain skills at an early age • The Eswatini National Curriculum Framework articulates a model career path for TVET on page 18 and 22. (However, this needs implementation considerations)

	• The Eswatini National Education Sector Policy 2018 also has a TVET strategic framework for TVET • Reports from Eswatini National Dialogues do place emphasis on the need to introduce TVET in the school curriculum
Lesotho	• Annual TVET fairs by Government • TVET road shows • TVET career paths • Exclusive TVET shows by Technical Colleges
Malawi	• TEVETA and government organizes national skills days • TEVETA organizes TEVET fairs • Introduction of TEVET in primary and secondary schools • Use of the media to promote TEVET • TVET career guidance in primary and secondary schools • Establishment of incubation centers
Mozambique	• Government organizes national skills days • Government organizes TVET fairs • Government introduced Pre-Vocational Education in schools to ensure that students gain skills at an early age
Mauritius	• Government organises TVET Months where TVET Education is promoted for a whole month, several activities including career expos, debates etc. • TVET road shows • TVET career guidance in primary and secondary schools
Namibia	• Government identifies and appoints TVET ambassadors. • Career guidance on TVET is conducted in schools. • Government provides and enabling framework for TVET players to participate in World Skills competitions.
South Africa	• White Paper for Post-School Education and Training (2013) • National Plan for Post-School Education and Training (2021) • Government organises TVET Months where TVET Education is promoted for a whole month, several activities including career expos, debates etc. • Other Career Development Support initiatives through the DHET e.g. Road shows

Zambia	• TEVETA organizes
	   o National TEVET fairs
	   o Promotion of TVET in the media
	• Government introduced TEVET in primary and secondary schools

Zimbabwe	• The National Manpower Advisory Council facilitates quarterly economic sectoral meetings for promoting TVET employment creation, entrepreneurship and lifelong learning • Public TVET Institutions conduct compulsory Annual Career Days (Runs for 3-5 Days) for surrounding secondary education institutions

| | • TVET is administered from Secondary School level to Level 6 in Zimbabwe |
| | • Establishment of incubation and innovation centers |

One of the issues contributing to the negative perception of TVET is the low pay that TVET graduates receive when compared to the pay that graduates from the universities or institutes of higher learning in most of the SADC MS receive. Graduates who have spent the same number of years (4 years in University and 4 years in Technical College) are graded differently when employed both by the public institutions and private companies in some of the Members States including Malawi.

3.10 Systemic TVET Reforms

3.10.1 TVET Policy and Legal reforms
Since the 1990s SADC Member States have been implementing a varied range of TVET reform in terms of institutions, policy and programme. Key amongst the reforms the Member States are implementing include the development of the National Qualification Frameworks, the creation of TVET national bodies with oversight functions for training, certification, quality assurance and many other functions as summarized in Table 8.

Table 8. TVET Policies and legislations in the SADC

Member State	Policies and legislation	Focus areas
Malawi	• National Education Policy (2013) • TEVET Policy (2013) under review • TVET Act (1999) Under review • Malawi Qualification Bill (MAQA, 2021) • Education Act (2012) • National Council for Higher Education (2011)	• The TEVET Act creates the Technical, Entrepreneurial and Vocational Education and Training Authority (TEVETA). • MAQA Bill establishing the Malawi Qualification Authority and NQF awaiting approval by Parliament • Decentralized governance and management of public TEVET institutions provided for in the revised TEVET Policy • Establishment of the National Council for Higher Education (NCHE) responsible for assessing and accrediting institutions of higher education such as universities and colleges.
South Africa	• White Paper for Post-School Education and Training (2013) • National Plan for Post-School Education and Training (2021)	• SAQA provides for the development and implementation of NQF; establishment of SAQA. • National Education Policy Act articulates the policy, legislative and monitoring responsibilities of the

	• South African Qualifications Authority (SAQA) Act No. 58 (1995) • National Education Policy Act (1996 • Higher Education Act No. 101 (1997) • Further Education and Training Act No. 98 (1998) • Skills Development Act No. 97 (1998) • General and Further Education and Training Quality Assurance Act No. 58 (2001) • Further Education and Training (FET) Colleges Act No. 16 (2006): • National Qualifications Framework (NQF) Act No. 67	Minister and formalizes the relations between national and provincial education authorities. • Higher Education Act establishes the Council of Higher Education. • Further Education and Training Act provides for the governance and funding of FET colleges. • Skills Development Act creates the National Skills Agency, establishes Quality Council for Trades and Occupations, regulates skills development apprenticeships and learnerships. • General and Further Education and Training Quality Assurance Act establishes UMALUSI as the quality council for FET colleges. • Further Education and Training (FET) Colleges provides regulation of FET, establishment, governance, funding and employment of staff for public FET and registration of private FET colleges. • National Qualifications Framework manages the NQF, its qualifications and quality assurance.
Namibia	• Vocational Education and Training (VET) Act No. 1 (2008) • Education Act No. 16 (2001) • Namibia Qualifications Authority Act No. 29 (1996) • National Technical and Vocational Education and Training (TVET) Policy (2021)	• Namibia Qualifications Authority (NQA) was established in 1996 whose mandate is to oversee education and training on the national, regional and local levels.
Eswatini	• Education Policy (1999) • Education Sector Policy 2011 • Education Sector Policy 2018 (new edition) • Swaziland National Curriculum 2018 • National Education Review Commission 1985 • Skills for the Future: The relevance of School and Tertiary	• Vocational and Industrial Training Act establishes the Industrial and Vocational Training Board. It also provides a legislative framework for apprenticeship schemes, trade testing and guidelines for the establishment of training schemes. • Human Resource Development and Planning Bill 2003 provides for the establishment of a National Training and Qualifications

	Education to the World of Work (1998) • Swaziland Higher Education Act (2013)Education Act 1982 • Industrial and Vocational Training Act (1982)Human Resource Development and Planning Bill (2003)	Authority (NTQA) with responsibility for the setting up of a National Qualifications Framework (NQF) and managing all aspects of TVET. • The Higher Education Act establishes Eswatini Higher Education Council (ESHEC) which developed the Eswatini Qualifications Framework (ESQF) in 2016.
Lesotho	• Higher Education Policy (2013). • Higher Education Act (2004) • Lesotho Technical and Vocational Training Act (1984) • Education Act (2010)	• Higher Education Act establishes the Council on Higher Education (CHE) as a statutory corporate body; the Act also establishes the Lesotho Qualification Authority which is responsible for the development and implementation of the Lesotho Qualifications framework. • The LTVT Act establishes a Department of Technical and Vocational Training and a Technical and Vocational Training Advisory Board
Botswana	• TEVET Policy (1997 • Tertiary Education Policy (2008) • Botswana Qualifications Authority Act (2013)	• Botswana Qualifications Authority Act establishes the BQA
Zambia	• Technical Education Vocational and Entrepreneurship Training Authority Act (2005) • Education Act (1966)	The Technical Education, Vocational and Entrepreneurship Training established the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA), provides for the establishment of Government-run TVET institutions and outlines their management structure, as well as a regulatory framework for all TVET providers Zambia Qualifications Authority (ZQA), was established in
Zimbabwe	• Education Act (amended in 2019	Manpower Planning and Development Act regulated the management, operation and maintenance of TVET

		institutions, universities, teachers' colleges, apprenticeship and vocational training schemes. The Act also establishes the Training Levy and National Manpower Advisory Board
	• Manpower Planning and Development Act (1984) amended in 1991 and 2004 • Vision 2030 (2018) • Education Sector Strategic Plan (2016 -2020)	• Zimbabwe National Qualifications Framework was implemented in 2018
Mozambique	• Vocational Educational Law (2014) • Education Act (1992).	• Vocational Education Law (2014) establishes the National Professional Education Authority (ANEP) to regulate all TVET • Education Act establishes the Mozambican education system, including the provision of TVET.
Mauritius	• Education Act (1996) • Mauritius Institute of Training and Development (MITD) Act 2009 • Apprenticeship Act (1968) • Mauritius Qualifications Authority Act (2011) • Human Resource Development Council Act (2003) • Skills Development Authority Act (2019) • Institute of Technical Education and Technology Act 2021.	• The Mauritius Qualifications Authority Act establishes the MQA • The Human Resource Development Council Act establishes the Human Resource Development Council (HRDC).

Besides the policy and legal reforms, each of the 10 Member States is implementing various types of TVET reforms that are aimed at strengthening the institutional and organizational capacity to effectively manage and facilitate the reforms in the TVET sector as summarized below.

Botswana
TVET reform in Botswana started in the 1990s with the establishments of the Tertiary Education Council (TEC) in the 1994, development of the National Policy on Education, establishment of the Botswana Training Authority (BOTA) under the Vocational Training Act of 1998. TEC and BOTA are responsible for vocational education and skills development even though they operate at different levels of the system and have two different target audiences. Realizing this policy incoherence, the government facilitated the development of the National Human Resources Development Strategy in 2009. Implementation of the strategy has led to the establishment of the National Human Resources Council under the then Ministry of Education and Skills Development, which will eventually absorb the functions of BOTA and TEC.

In 1997, the Botswana government developed the TEVET Policy of (1997) which espouses Quality Assurance instruments of TVET. In 2013, the Botswana Qualifications Act (2013) was developed and paved the way for the inclusion of TVET education in the National Credit Qualifications Framework (NCQF). Through this Act, the Botswana Qualifications Authority was established. Currently the government is in the process of reviewing the National TVET policy.

Malawi
The government through the Ministry of Labour has finalized the revision of its 2013 TVET Policy. The revised policy promotes decentralized governance and management of TVET institutions and establishment of Sector Advisory Councils to oversee the performance of TVET as well as promote collaboration and coordination amongst the TVET players in the country. Currently the government is in the process of reviewing its 1999 TVET Act. On the other hand, the Ministry of Education has developed the Malawi Qualification Bill and Malawi Qualification Framework which is awaiting approval by Parliament. The MAQA Bill establishes the Malawi Qualification Authority which is going to implement and enforce the National Qualification Framework.

Mozambique
As part of the TVET reform agenda, the Mozambique government is implementing the Integrated Vocational Reform Programme (PIREP) which aims at establishing an integrated, coherent, flexible and labour market driven vocational education system.

South Africa
The South African government has been working on improving access to post-school education and employment. South Africa is focusing on infrastructure as an important starting point for access and the government is providing a three-year university funding cycle to support infrastructure development. The government has developed the Further Education and Training (FET) Turnaround Strategy which is focusing on building the capacity of TVET colleges with a focus on management and human resources. The government has distributed R2.5 billion for the refurbishment of FET colleges. While this helps build, support and resource the public TVET colleges, South Africa is considering a funding strategy that is more sustainable in the long term. The government has also created a National Student Financial Aid Scheme (NSFAS) that would provide financial aid to academically deserving students from poor households. Finally, the government has established the National Artisan Development Support Centre (NADSC), a three-year project funded by the National Skills Fund, to provide students with specialized skills for the artisan sector of their economy

Eswatini
The government of Eswatini has, over the years, been implementing a number of TVET related reforms following a subsector review in 2005 which identified gaps between TVET provision and labour-market needs. As a result of this review, the Government initiated a number of TVET reforms which were developed in cooperation with national and international partners. Some of such reforms include a review of policies and legislation related to TVET including Eswatini Qualification Framework (**ESQF 2021**), Vocational Act; National Vocational Qualifications Framework; Swaziland Training Authority Bill; TVET Financing Model; and CBET TVET Curriculum.

3.10.2 Articulation of TVET Education in National Qualifications Framework

SADC Member States are at different stages of developing their National Qualification Frameworks which create an enabling environment to allow articulation within and between education pathways. Some countries such as South Africa, Mauritius, Botswana, Lesotho, Zambia and Zimbabwe have national articulation policies while Malawi and Namibia are still in the process of finalizing their national qualification frameworks. Below are some of the examples where Member States have articulated TVET education in the National Qualification Frameworks.

South Africa

The introduction of legislation for an overarching National Qualifications Framework (NQF) in 1995 was one of the first education policies implemented in the aftermath of South Africa's transition to democracy. In seeking to overcome its former racially fragmented education policies, South Africa attempted, through the NQF, to align all education and training provision within a single framework that emphasized redress and equity intentions. Formal general school qualifications and university qualifications have been clearly defined and tend to be specific to particular institutions. However, vocational qualifications span at least three institutional types: schools, universities and technical and vocational education and training (TVET) colleges. As a result, they do not sit comfortably within the South African NQF, particularly from a quality assurance perspective. Subsequent NQF iterations (RSA, 2009) therefore resulted in three quality assured 'sub-frameworks': for general academic and general vocational qualifications, for occupational qualifications, and for university qualifications. The Department of Higher Education and Training (DHET) developed the Articulation Policy. The policy allows articulation within and between the three NQF Sub-Frameworks. (SAQA, 2017).

Zambia

Established under the Zambia Qualification Authority (ZAQA) the Zambia Qualifications Framework (ZQF) was developed and implemented in 2016. The Framework comprehensively covers all learning achievements and pathways. The Framework is a 10 Level Framework made up of a single integrated system comprising three (3) coordinated qualifications sub-frameworks which include General and Further Education Sub Framework; Trades and Occupations Sub Framework; and Higher Education Sub framework. The Framework among others creates a single integrated national framework for learning achievements; facilitates access to, and mobility and progression within education, training and career path; enhances the quality of education and training; and promotes education, training and employment opportunities. ZAQA coordinates the outputs of appropriate authorities responsible for the delivery of the three (3) sub-Frameworks of the Framework. Appropriate Authorities include Higher Education Authority (HEA), TEVETA, ECZ, training institutions, professional bodies.

Malawi

In Malawi, the Malawi Qualification Bill and Policy have been developed but not yet gazetted and approved by government. The MAQA Bill establishes the Malawi Qualification Authority which is expected to roll out the implementation of the National Qualification Framework. Malawi's

NQF has been aligned to the SADC Qualification Framework and has provided for rationalization and articulation from levels 1-10.

Mauritius

The Mauritius National Qualification Framework (MNQF) was established in 2001 through the Mauritius Qualifications Authority Act (2001). The MNQF is aligned to the SADC Qualification Framework. The framework was established to put order in a jungle of qualifications with no consistency in titles and where it was difficult to gauge the value of a qualification (MGA 2019). The MNQF of Mauritius is depicted by a tracked structure but comprehensive in nature in view of the specific characteristics of the education sub-sectors namely Primary/Secondary Education, TVET and Tertiary Education. Qualifications in the Primary/Secondary strand range from Level 1 to Level 5 on the NQF while qualifications within the TVET strand starts at Level 1 and are available up to Level 6 on the NQF. Within the Tertiary segment, the qualifications range from Level 5 to Level 10 on the framework (MQA, 2019). The MNQF transforms the education system to ensure the recognition of prior learning (RPL) to enable vertical progression from tertiary institutions to higher education institutions. It also provides for the horizontal movement of learners through the standardization of similar courses in institutions of higher and tertiary education.

Zimbabwe

The Zimbabwe National Qualification Framework (ZNQF) was established in 2018. The framework integrates education and training into a unified structure of qualifications recognized locally and internationally. The ZNQF provides a mechanism to relate basic, tertiary and higher education frameworks to each other in a manner that recognizes prior learning and mobility of learners and graduates. The Framework establishes pathways for vertical progression of education and training qualifications. It also establishes pathways for horizontal comparability of the qualifications as well as develop standardized qualifications for increased coherence between education output and the needs of the labour market (ZNQF, 2018). The ZNQF transforms the education system to allow recognition of prior learning and enable vertical progression from tertiary institutions to higher education institutions. It also provides for the horizontal movement of learners through the standardization of similar courses in institutions of higher and tertiary education. The Framework provides for the harmonization and standardization of both new and existing Zimbabwean qualifications. The Framework has 10 levels of qualifications starting from basic, tertiary and higher education.

3.10.3 Existence of Quality Assurance Frameworks or Rubrics for the TVET sector

Quality assurance has become part of the TVET reform agenda in the SADC region. The assessment reveals that all the 10 countries in this assessment has developed TVET quality assurance frameworks. The Quality Assurance Frameworks (QAF) are instruments used by registered training institutions to enhance their quality assurance processes benchmarked against international norms. The quality assurance framework mainly consists of the totality of principles, methodologies, actions, measures and instruments through which quality in TVET is assured, both at system and provider level. According to Bateman et al., (2012), Bateman & Coles, (2013), the Quality Assurance Framework ensures the quality assurance of:

    (i)   the product through the accreditation of achievement standards (such as educational and/or competency standards as well as certification of a qualification);

(ii)   the education and training providers through registration processes based upon their infrastructure, financial probity and health, staff qualifications and experience, management systems, delivery systems, and student support systems;

(iii)   the monitoring and auditing of provider processes and outcomes, including student learning and employment outcomes as well as student and user satisfaction levels;

(iv)   the control, supervision or monitoring of assessment, certification and graduation procedures and outcomes;

(v)   provider or system wide evaluations of quality, including evaluations by external agencies; and

(vi)   the provision of public information on the performance of providers such as programme and component completions, student and employer satisfaction.

3.11 Mechanisms for TVET funding and financing

TVET sector financing in the SADC region is lower compared to the other sectors of the economy such as agriculture, education, health and others. Although already small compared to the other sectors, TVET financing vary across he ten Member States. For example, in Malawi, TVET financing is less than 1% of the national budget while in Mozambique and Mauritius, it is 8-10% and 3% of the national budget respectively.

The financing mechanisms for TVET in the region is dependent on whether the TVET is being provided by the government or private sector providers. Sources of financing for TVET include government subventions, TVET levy/funds, fees (student, research, etc.), grants from development partners. Financing of TVET in the private sector is most of the times from the shareholders, fees and to some extent the development partners as summarized in Table 9.

Box 5. TVET financing in Zimbabwe

TVET institutions in Zimbabwe, both public and private, rely heavily on tuition fees for financing training materials and workshop equipment. This represents a major challenge to making the system equitable and accessible to young people from poor families. At the same time, it has a negative effect on the quality of training. Training institutions, especially in rural areas, lack the financial resources to maintain and renew learning equipment and tools, which results in poor quality of delivery.

Table 9. TVET financing in the SADC Member States

Country	Sources of Funding				
	Government	Fees	Levy/fund	Development Partners	Shareholders
Malawi	X	X	X	X	X
Zambia	X	X	X	X	X
Zimbabwe	X	X	X	X	X
Mozambique	X	X		X	X
Botswana	X	X	X	X	
Mauritius	X	X	X	X	
Lesotho	X		X	X	X
Swaziland	X	X	X	X	X
Namibia	X		X	X	X

Eswatini	X	X	X	X	X
South Africa	X	X		X	

Source: Self-generated from literature review

From the table above, it is clear that TVET financing is drawn from similar sources in all the SADC Member States. However, the issue is not only the source but the level of financing. The higher the level of financing, the more robust the investments in TVET by the Member States.

3.12 Level of uptake and use of New Learning Technologies in the TVET Sector

Education systems in the world today are undergoing major shifts in their delivery systems in order to accommodate shifting demands in the lifestyles of people (Obwoge and Kwamboka, 2016). TVET systems in the SADC region are slowly and steadily also starting to move towards implementing e-learning in their teaching and learning processes. The COVID 19 pandemic which forced schools and colleges to close has stimulated the demand for the use of new learning technologies.

Box 6. Use of new learning technologies in Zimbabwe

The COVID 19 pandemic has influenced the Government of Zimbabwe to promote new learning technologies in education and TVET. Currently, in Zimbabwe all Public TVET institutions are using customized MOODLE platforms for e-learning. The government through the Experts in Digital Growth and E-Learning (EDGE) Programme is building the capacity of TVET lecturers and instructors to fully utilize the E-learning MOODLE platforms even though some lecturers and instructors are resisting to sue the new learning technology. The resistance may be due to the capacity or attitude of the lecturers and instructors. TVET Institutions are exploring ways of using learnable devices to complement e-learning. Currently uptake by the lecturer and instructors of the approved e-learning platforms is pegged at 40% since the majority of private TVET institutions are using ZOOM, Google Class and Microsoft Teams Platforms and are yet to adopt the government approved MOODLE and ALFRESCO e-learning technology platforms

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Use of e-learning as a mechanism to reach the students who are unable to attend face to face classes due to the COVID 19 is increasing in the 10 SADC Member States. In order to embrace new learning technologies, several Member States such as Botswana, Malawi. Zambia, Namibia, Mauritius, Zimbabwe have developed strategies to guide adoption and implementation of new learning technologies. For example, the government of Botswana has established an E-education policy (ready for submission to Cabinet for approval) which is promoting and advocating Open Educational Resources (OER) in TVET and procurement and installation of fit for purpose ICT equipment and facilities in all the TVET training institutions. In addition, the government has developed the Smart Botswana Transformation Strategy which focuses on digitizing service provision across the public sector. As part of the Smart Botswana Transformation Strategy implementation, the government is implementing the Botswana Research and Education Network (BotsREN) as one of the key projects to ensure that education and research institutions are connected through the network. The main purpose of BotsREV is to improve internet connectivity in order to provide fast pathways and widespread technology transfer to society and industry in Botswana.

In South Africa, TVET providers are now using Smart classrooms as well as 41R High technology Classrooms and the National Open Learning System (NOLS) that provides for online

learning opportunities in the PSET system and on 4th Industrial Revolution (4IR) initiatives. In addition, the government is using leaner management information systems (LMS) and government has developed Guidelines for a basic LMS implementation to provide guidance and assist TVET colleges to effectively utilize the system. While in Malawi, the revised draft TEVET policy (2021) has embraced the use of new learning technologies such as e-learning and ICT in TVET. The majority of the SADC Member States have introduced Green technologies such solar and wind power technologies in the TVET curricula.

Although the 10 Member States have embraced the use of New Learning Technologies in the TVET Sector, there are still some adoption challenges. Participants during the regional TVET meeting in Malawi in October 2021 agreed that the uptake of new learning technologies is still low in the region and its implementation is slow due to the cost elements and attitude of the lecturers and instructors toward the use of new learning technologies. The investment cost for new technologies such as e-learning and ICT are high and most of the TVET providers, both public and private, have limited financial and human resources to invest in the new technologies. Most of the lecturers, instructors and learners have challenges in digital literacies and this affect the adoption and use of new learning technologies such as e-learning and ICT. The limited financial resources and the low capacity to embrace new technologies are affecting the adoption of new learning technologies such as e-learning and ICT in the SADC Member States.

> *In his presentation during the Regional TVET meeting in Malawi in October 2021, Mr Thivhudziwi W. Vele of the Department of Higher Education and Training in South Africa said, "use of e-learning and digital technologies in South Africa are fast advancing, in our country we have introduced a number of e-learning and ICT related innovation including the introduction of SMART classrooms; 4IR High Tech Digital Classrooms and learner management systems. Though there is a lot of excitement amongst the TVET teachers and learners, uptake is still very low due to the cost element of the innovations and technologies. He is optimistic however that with more collaborations between colleges and other entities the adoption rate will increase and accelerate."*

3.13 Measures adopted to mitigate Covid-19 impacts

The Covid 19 pandemic has impacted the economies of many countries in the SADC region. The education sector has not been spared from the impacts of Covid 19. Across the region and the global, school-based learning was largely stopped for an extended period time. Between 2020 and 2021 all the 10 Member States experienced national lockdowns due to the COVID 19 pandemic which also resulted in school closures. In response to the national lockdowns and resultant school closures, the TVET system has been responding in a number of ways in order to reduce learning losses incurred during school and business closures.

All the 10 Member States have developed policies and strategies to mitigate the impacts of the diseases as summarized in table 10. All the 10 Member States have embraced e-learning and use of ICT as some of the measures to control the spread of Covid 19. Some of the strategies and measures adopted by Member States include forcing people to work from home, organizing virtual meetings and workshops, limiting the number of large gatherings of people, reducing contact hours between students/learners and teachers amongst others

Table 10. Measures adopted to mitigate Covid 19 impacts

Country	Country specific measures
Botswana	• Use of technology to integrate teaching, learning, capacity building, research and administrative practices. • Use of media such as audio, images, animation and embrace e-learning. • Use of e-learning • Enforcement of wearing masks, washing hands, sanitization and social distancing in colleges • Implementation of Covid 19 control measures • Phased re-opening of colleges post lockdowns • Adjusted academic calendars
Eswatini	• Online learning and training • Reduction of contact hours and numbers in a class through rotation
Lesotho	• Adjusted Academic Calendars • Covid 19 regulations • Adapting curricula to accommodate Covid 19-Regulations
Malawi	• Introduction of online learning and training. • Reduction of contact hours and size of classrooms. • Enforcement of wearing masks, washing hands, sanitization and social distancing in colleges. • Implementation of Covid 19 control measures
Mozambique	• Adjusted Academic Calendars • Covid 19 regulations • Adapting curricula to accommodate Covid-Regulations
Mauritius	• Adjusted Academic Calendars • Covid 19 regulations • Rotation of campus attendance • Adapting curricula to accommodate Covid-Regulations
Namibia	• Adhering to the World Health Organization`s (WHOs) rules and regulations. • Introduction of interim measures such as lock down of centres, schools and institutions of higher learning, rotation of teachers/trainers/lectures and trainee/learners/students, checking temperature, sanitizing of hands etc. • Voluntary testing for COVID 19. • Fumigation of buildings.
South Africa	• Adjusted Academic Calendars • Covid 19 regulations • Rotation of campus attendance • Adapting curricula to accommodate Covid-Regulations e.g. Managing Group activities and tasks
Zambia	• Implementation of national guidelines on COVID19 prevention • Implementation of distance and flexible and blended learning. • Enforcement of wearing masks, washing hands, sanitization and distancing in colleges

Zimbabwe	• All TVET Institutions are implementing the National TVET COVID19 Guidelines during face to face sessions as a form of Business Continuity Planning (BCP)
	• Blended Learning has been adopted to ensure learning continues with examination classes being given priority for face to face learning
	• Enforcement of wearing masks, washing hands, sanitization and distancing in colleges

4.0 Emerging issues from the study findings

The TVET sector continues to play a critical role to the industry transformation of the SADC region. Although at different stages, the 10 SADC Member States have embraced TVET reforms. As part of the reform agenda, the 10 Member States have reviewed and developed their policies and legal frameworks, developed National Qualification Frameworks (NQFs) and also adopted new models and technologies for delivering TVET much of which have been influenced by the Covid 19 pandemic.

4.*1*.1 Monitoring and Evaluation of TVET

All the 10 SADC Member States have monitoring and evaluation systems which they are using to track progress and measure the impacts of TVET in their countries. Various stakeholders such as the industry, TVET providers, academia and research participate through sector committees, annual and biannual TVET forums which are organized to review the performance of TVET. Few Member States however, have rolled out the Labour Market Information System (LMIS) and TVET Management Information System (TMIS) as tools to help generate data as well as track progress of TVET in the countries. TVET is a cross cutting issue and cuts across many sectors of the national economies and yet the M&E systems are sector specific. The M&E system are not generating adequate data to inform and provide feedback to the entire TVET system in most of the Member States.

In an effort to improve monitoring and evaluation of TVET systems the 10 Member States are developing M&E systems as part of the policies and strategy development processes. In addition, some country like Malawi have developed M&E system to allow the industry to participate in the monitoring and evaluation of the TVET system. All the Member States are expected to align their M&E systems to the SADC TVET monitoring and evaluation framework which is been developed. Member states are currently providing inputs to the indicators outlined in the SADC TVET M&E framework.

4.*1*.2 TVET research capacity

All the stakeholder consulted during the study agree that research has a big role to play in helping member states to forecast implications for TVET and for general education from change in technology as well as national and international patterns of trade. However, few TVET research activities are being carried out in the majority of the 10 Member States. Realizing the existing research gap in the TVET system, several Member States like Malawi, Zambia, Zimbabwe, South Africa, Mauritius have prioritized research in their TVET policies. In Member States like South Africa, Malawi, Mauritius, Botswana and Zimbabwe, the TVET providers are collaborating with universities and institutions of higher learning to carry out collaborative research. In South Africa, the DHET has commissioned a Five Year Research Programme on

TVET which is being undertaken by the University of the Western Cape. The University has partnered with a number of other research organisations to undertake specific research projects in TVET. The Research Programme aims to build a significant local body of knowledge that can inform TVET policymakers, practitioners, prospective employers, learners and their communities, about the inputs, practices, performance and outcomes of public TVET Colleges, with a view to enhancing knowledge and understanding for planning and delivery of interventions towards continuous improvement. There are about 36 sub-projects under the research programme and they focus on a number of themes including the following themes:

- Overview of TVET College Sector;
- Responsiveness of TVET Colleges to the world of work;
- Access and Demand;
- Evaluation of TVET Colleges;
- Teaching and Learning;
- TVET College Lecturer Development;
- Private College Sector; and
- Capacity Building, Governance and Dissemination.

4.1.3 Articulation arrangements and pathways of the Education System
Despite the existence of the National Qualification Frameworks in the majority of Member States there are still some challenges with the articulation pathways. Stakeholders say that there is continued and persistent challenges for a TVET graduate to join university education system. In South Africa, Mauritius, Zimbabwe, Botswana, Namibia, the government has put in place platforms to allow TVET stakeholders discuss and iron out the challenges being faced with the articulation arrangements and pathways in the education system.

4.1.4 TVET linkage with the labour market
Member States TVET policies have provided for the participation of all stakeholders including the industry, private sector, civil society and others in the governance of TVET institutions. The policies have also provided for the establishment of sector advisory committees or councils responsible for various aspects of TVET such as assessment, quality assurance, certification, monitoring and evaluation, curriculum review and development. Stakeholders agree that these platforms are expected help strengthen the linkages between TVET and labour market. However most of these committees and platforms are not fully functional in some Member States due to among others limited financial resources to facilitate their meetings.

4.1.5 Equity and inclusion
Enrolment rates of girls and special needs youths in TVET is low despite Member States putting in place policies and strategies to promote and increase access of girls and special needs youths in TVET. Some of the strategies that have been put in place include provision of scholarships and bursaries to girls and special needs students, use of female ambassadors as promoters of TVET (Ngwazi zazikazi in Malawi), organization of TVET days and weeks and TVET career guidance talks in schools. In addition, TVET programmes have been introduced in the media houses both print and electronic to raise awareness on the access to TVET by girls and special needs youths. Civil society organizations and other non-state actors have a big role to play to influence Member States to fast track implementation of the affirmative policies and strategies on equity and

inclusion. In addition, there is need to influence government to allocate adequate financial resources to support girls and special needs youths to access TVET.

4.1.6 TVET as a career path and life-long learning for all
The 10 SADC Member States have put in place policies and strategies to promote TVET as a career path and lifelong learning. Some of such strategies include introduction of prevocational education in schools, national skills days or weeks, use of TVET ambassadors as promoter of TVET, national TVET fair amongst others. Though these strategies are generating good results, there is need to develop and implement strong and robust advocacy and lobbying strategy in order to influence change of perception amongst youths and parents. In addition, MS need to fast track the alignment of the TQF to the NQFs in order to ensure that graduates from the TVET system are graded the same way and level as the graduate from the general education system.

4.1.7 Systematic TVET reform
Over the past 20 years Member States have developed and enacted policies and laws to improve the performance of the TVET systems. Some of the reforms that have taken place include establishment of National Qualification Authorities and NQF, establishment of Quality Assurance Bodies and frameworks. Even though the systematic reforms are taking place in the TVET sector, the financial and capital investments in TVET in the majority of the 10 Member States are low. More investments are required in order to allow the Member States derive meaningful benefit from the TVET sector.

4.1.8 Mechanisms for TVET funding and financing
The majority of the Member States derive their TVET financing and funding from government subventions, levies, shareholders and fees (from students, research etc.). Despite its importance to promoting industrialization in the SADC region, the sector continues to face challenges of low investments in terms of finances, teaching and learning materials, infrastructure, capacity development compared to other sectors of the economy such as agriculture, education, health and others. Member states need to seriously consider providing more resources for the development of the TVET sector.

4.1.9 Uptake and use of new learning technologies
Use of new learning technologies such as e-learning and ICT is facing a number of challenges related to instructional and pedagogical skills. These challenges are often compounded by the practical nature of the TVET courses. The attitude of lecturers and resistance to change is another factor affecting adoption of new learning technologies in the TVET sector. Much as the TVET system would want to adopt and use new learning technologies, the investment costs for such technologies are high while the ICT capacity of the teacher is low. More investments in capacity building of teachers, teaching and learning materials, infrastructure is required in order to improve and increase the uptake and use of new technologies in the TVET sector.

4.2   Country priorities

Member states identified and prioritized key focus areas requiring support to improve the TVET systems at both national and regional level. The priority focus areas were discussed and validated during the regional TVET meeting at Ufulu Gardens in Lilongwe, Malawi on October 2021. The country specific priority focus areas are summarized in table 11 and box 5

Table 11. Member states and regional strategic TVET priority focus areas

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┌────────────────────────────────────────────────────────────┐
│ Box 5. Member state TVET Priority areas                    │
│  • Funding and financing of TVET                           │
│  • Development of the capacity building strategy for teacher│
│    and instructors                                         │
│  • Review the TVET Policies and Acts                       │
│  • Strengthen coordination and collaboration in the TVET   │
│    sector                                                  │
│  • Promote E-learning in TVET                              │
│  • Review of TVET curriculum to meet modern socio-         │
│    economic demand                                         │
│  • Alignment of TQF to the NQF                             │
│  • Introduction of TMIS in the TVET sector                 │
│  • Establishment of the TEVET teacher training college     │
│  • Promotion of e-learning in TVET                         │
└────────────────────────────────────────────────────────────┘
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Country	National Priority	Regional Priority
Eswatini, Lesotho, Mozambique	• Increasing funding and financing of TVET • Facilitate development of the national capacity building strategy for teacher and instructors • Review the TVET Act • Strengthen coordination and collaboration in the TVET sector • Promote E-learning in TVET	• Support exchange and learning visits • Technical support and capacity building on e-learning • Establishment of e regional TVET teacher training college • Sharing of TVET best practices in the region • Review of TVET curriculum
Botswana, Namibia, South Africa	• Promote alignment of TVET to the NQF • Stakeholder engagement on articulation arrangements and pathways for education	• Strengthen the regional knowledge base for planning, monitoring and evaluating TVET for improved policy • Sharing of TVET experiences and lessons learnt
Malawi	• Establishment of the TEVET teacher training college • Alignment of TQF to the NQF • Promotion of learning and exchange visit for the TVET sector	• Promotion of E- learning in the TVET sector • Strengthening and promoting equity and inclusion in TVET • Strengthening Research and development • TVET staff and institutional development
Zambia	• Development and review of TVET curriculum to meet modern socio-economic demand • Develop renewable energy program (green TVET) • Review TVET Act of 2005	

| Zimbabwe | • Development of TVET national policy
• Development of the TVET staff development strategy
• Introduction of TMIS in the TVET sector | |

5.0   Conclusion and recommendations

The 10 Member States have undertaken policy and legal reforms to improve performance of the TVET systems. The major reforms relate to the establishment of National Qualification Frameworks, Quality Assurance Bodies and frameworks. Some of the TVET reforms focuses decentralizing the governance and management of TVET institutions as well as strengthening the participation of the employers and other stakeholders in the monitoring and evaluation of the TVET systems. The reforms are however at different levels and their implementation process are most of times slow and are usually poorly resourced financially. The sector continues to be supply driven and less responsive to the needs and demands of the labour market. Despite the many challenges affecting the sector, Member States have adopted new learning and training approaches and technologies. The Covid 19 pandemic and the resultant national lockdowns have increased the demand for new approaches and adoption of new learning technologies such as e-learning in TVET. Adoption of new learning technologies have also brought in new challenges related to the practical nature of TVET subjects which require face to face instructions and learning. Based on the study findings, a number of recommendations are being made to facilitate improved delivery and performance of TVET systems in the SADC Member States.

5.1 Strengthen monitoring and evaluation of TVET systems in some SADC Member States

According to UNESCO (2012), there is a general consensus on the nature of the monitoring indicators that can be included in the TVET monitoring framework for tracking progress and impact of TVET at national, regional and global levels. However, in most of the 10 SADC Member States data capturing and reporting systems on TVET are limited and weak. There is need therefore to build the capacity of the Member States in order to strengthen their data capturing and reporting systems.

Some Member States such as Malawi, Zambia, Eswatini, Lesotho, Mozambique have not yet rolled out their Labour Market Information Systems (LMIS). Many stakeholders interviewed during the study agreed that labor market information is essential to the Member States economies since it provides for the efficient operation of labor markets by supplying quality labor market intelligence. The Member States labor markets cannot function efficiently and effectively without quality information to support the investment decisions of the workforce development system. There is need therefore to strengthen data capturing and reporting systems in order to ensure that quality labour market information is collected and analyzed to inform decisions for the improvement of the TVET systems in the Member States.

5.2 Build TVET research capacity in the SADC Member States

Few TVET research activities are being carried out in the majority of the 10 Member States and yet the TVET system continue to face a number of challenges as identified in this study. Policy makers are expected to make evidence based decisions during policy making. Some of the policy

decisions include broader investments in TVET, clear articulation arrangements and pathways with the education system; strengthened practice orientation of TVET, increased networking of TVET providers and the labour market among others. The greater emphasis on the more effective use of e-learning and ICT in teaching and learning and their associated challenges require evidence to inform decision making.

In an effort to build the research capacity, it may be appropriate for the TVET provider to foster strong research partnerships and collaboration with the industry; and with the universities; and also amongst the TVET providers themselves just like DHET which has partnered with the University of Western Cape in the implementation of its Five Year TVET Research Programme.

. Member States need to consider establishing TVET Centers of Specialization/Excellence to focus on TVET research and other innovation development activities as part of building the research capacity. This can be in line with the recent developments at the SADC level where SADC University of Transformation is on the cards.

5.3 Strengthen and promote articulation arrangements and pathways

There is need to have coherent and meaningful articulation arrangement and pathways of the education system in the SADC Member States where strong coordination within and between the different components are framed for the benefit of the students. According to Blom (2013) the ideal is to have the ease of movement and progression, as well as flexible approaches to access and credit transfer, to enhance efficiency and mobility within the system. Good examples exist in Australian and America where the systems of articulation make it clear that policy and models are not enough but need to also be based on discussion and negotiation between partner organizations (TVET providers and the Universities).

In order to deal with articulation challenges in the SADC Member States there is need to establish deliberate mechanisms at national level to allow dialogue between the institutions of higher learning (Universities) and TVET providers on the articulation arrangements and pathways.

5.4 Mainstream gender equality and inclusion issues in TVET

There are far-reaching inclusion-related challenges in TVET and TVET policy in the SADC Member States. The study established that access to TVET by girls and special needs youth is very limited. Access to TVET continue to favour male youths than girls and youths with special needs. A number of strategies have been put in place by the Member States to promote equity and inclusion in TVET such as special bursaries and scholarships for girls and special needs students and many others. There is need therefore for Member States to mainstream gender aspects and gender equality issues as well as continue implementing targeted support for vulnerable groups. There is need also for the Member States to establish platforms and mechanism to promote improved access of female youths and disadvantaged youth to TVET. CSO and other NSA actors need to advocate for improved enrollment of girls in TVET institutions.

5.5 Build capacity for increased uptake and use of new learning technologies

The TVET systems in the region are slowly embracing the use of new learning technologies. The use of new learning technologies is however facing a number of challenges which are often compounded by the practical nature of the TVET courses. The attitude of lecturers and resistance to change is another factor affecting adoption of new learning technologies in the TVET sector.

More investments in capacity building of teachers, teaching and learning materials, infrastructure is required in order to improve and increase the uptake and use of new technologies in the TVET sector.

5.6 Promote TVET as career path and lifelong learning for all

TVET in the SADC Member States continue to have a poor public image amongst the youths and parents. One key informants in Malawi said that TVET is commonly viewed to be *"a route for those who have failed and cannot manage to survive in the academic setting."* The negative public perceptions are reinforced by the "lack or limited progression routes from vocational-technical education into higher education. According to Habler et.al (2020) TVET is usually branded as a low-prestige career pathway, comprised of students who are unable to reach the academic level required for entrance to mainstream schools. Hence, the perception of TVET as a segment of education designed for dropouts or academically poor individuals is also predominant in all the 10 SADC Member states.

There is need therefore for Member States to use all the convincing strategies to promote TVET as a career path and lifelong learning for all the youth in the Region. There is need for Member States to convince youths, employers, communities and funding agencies that TVET is the future of the SADC Regional Integration and Industrialization Agenda. The TVET system needs to use the internet and social media to rebrand and reposition itself in the educational hierarchy, portray itself as innovative and customer-responsive and increase its market share, internationalize its programmes, and develop strategically important partnerships (Habler et.al (2020). Member States need to continue establishing and organizing TVET platforms such as TVET weeks or career talks and others in order to motivate the youth to join TVET as their career path and lifelong learning opportunity.

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