VETToolbox

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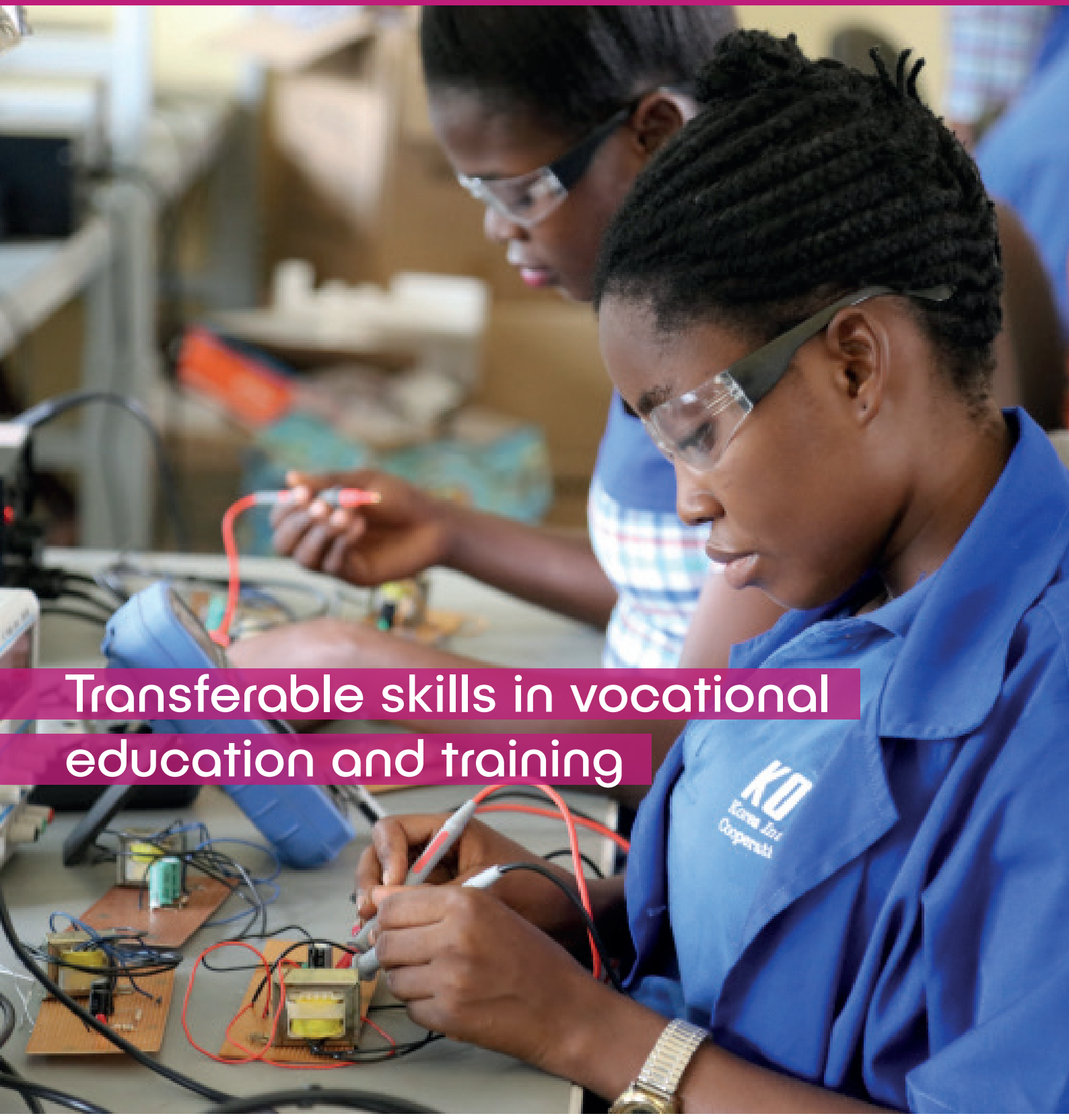

Transferable skills in vocational education and training

Implementing Agency

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

This document has been developed as part of the VET Toolbox project. The VET Toolbox was created in 2017 and provides partner countries with know-how, tools and advice to improve the effectiveness and inclusiveness of VET reforms. It focuses on supporting VET systems to:

- become more demand-driven, with more effective private sector engagement.
- become more responsive to labour market needs.
- provide increased access to (self-) employment, including for disadvantaged groups.

The VET Toolbox is co-funded by the European Commission and the German Government.
The VET Toolbox partnership is composed by GIZ, British Council, Enabel, LuxDev and AFD.

The intended beneficiaries of the VET Toolbox are:

- National vocational authorities and regulatory bodies, including training funds:
- National and international enterprises involved in VET partnerships;
- Quality assurance organisations responsible for learner assessments and examinations;
- Public, private or mixed VET training institutes and VET pre-service and in-service instructor training institutes;
- National, regional and sectorial business and professional associations and civil society organisations.

Website: www.vettoolbox.eu
Youtube: https://www.youtube.com/channel/UCbygn0xKnJa_2586DOXEmeg/videos
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E4D/SOGA

The VET Toolbox closely collaborates with, and has drawn experiences from GIZ's Employment for Sustainable Development in Africa (E4D) programme to promote employment, raise incomes and improve working conditions of, particularly, women and youth in Cameroon, Ghana, Kenya, Mozambique, South Africa, Tanzania, Uganda. E4D/SOGA – Employment and Skills for Eastern Africa - is a component of E4D aimed at promoting local employment and economic opportunities in and around natural resource-based industries and related sectors in Kenya, Mozambique, Uganda and Tanzania. E4D/SOGA is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), the UK Department for International Development (DFID), the Norwegian Agency for Development Cooperation (NORAD) and Shell.

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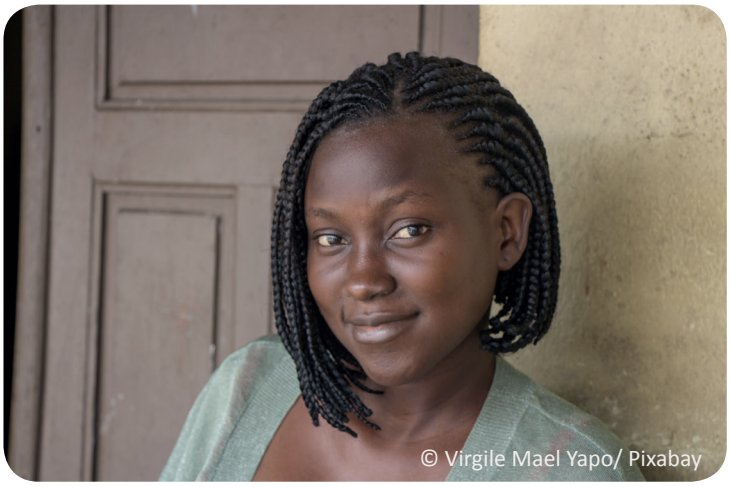
INTRODUCTION

Over the past decades, the experience gained with VET interventions has suggested that demand-led VET catering to a discernible demand for skills is more successful than supply-side focused VET. However, there is the challenge that it is not always possible to clearly describe the demand for labour. There are at least two reasons for this:

First, operators of large-scale investment projects typically outsource contract-based work packages to specialised sub-contractor companies. These, in turn, source the inputs they require to deliver the sub-contracted goods and services for which the operators engage them through a multi-tiered supply chain. This makes it difficult for project operators to establish and communicate precisely what skills are required when and by whom, and who will be hiring. In addition, it also makes it more challenging for VET interventions to apply a demand-led approach to skills development. A related problem is that sub-contractors bid for work packages against the background of their technical expertise and are then required to deliver within a set time frame. This does not give them long lead times to hire and train a local labour force.

Second, large-scale investment projects stimulate economic activities because workers and professionals working with or in the supply chain of these projects spend their wages and salaries on locally produced and retailed goods and services. The beneficiaries of these multiplier effects, often micro and small enterprises, are often not organised in a way that they can communicate effectively to government authorities their collective skills development needs.

OBJECTIVE AND TARGET AUDIENCE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The objective of this tool is to provide guidance on supporting the development of transferable skills to improve the employability of young labour market participants in countries where large-scale investment projects are expected to offer jobs and self-employment opportunities.


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The target audience includes:

- National vocational authorities and regulatory bodies, including training funds
- National and international enterprises involved in VET partnerships, especially around large-scale investment projects;
- Public, private and mixed VET training institutes and VET pre-service and in-service instructor training institutes;
- National, regional and sectoral business and professional associations and civil society organisation.
- Development projects/programmes/partnerships that support VET and life skills development for employment in and around large-scale investment projects.

CONTEXT

Multi-tier supply chains are typical for capital-intensive investment projects that comprise a labour-intensive construction phase, which is followed by a less labour-intensive operational phase. For example, these types of investments include oil, gas and mining projects; downstream energy and other utilities projects, and infrastructure and construction projects, including those intended to attract new types of investments to host countries, such as investments in industrial zone projects). When the construction phase of such capital-intensive projects is completed, workers move on to other projects located elsewhere. Or they move on to alternative employment opportunities, including as self-employed entrepreneurs.

In addition, when those employed in the construction phase but also in the operational phase of large-scale industrial projects spend their wages and salaries on locally produced and retailed goods and services, they stimulated wider demand for locally produced and traded goods and services that offer potential opportunities to a wide range of sole-trading entrepreneurs and micro and small-scale enterprises. These often struggle to improve their own skills or find workers with the relevant skills and competencies. Because they are small and their margins are low, they cannot afford to provide in-house training to new recruits. In turn, they are often not sufficiently organised to communicate effectively with government authorities and third parties what their skills development needs are.

When it is not possible to clearly describe demand, the resulting problem is that, although construction phases generate demand for local labour as well as opportunities for self-employment and enterprise development, the nature of the skills development required to match potential demand with an increase in supply is also less clear. VET interventions can deal with this problem by focusing on developing **transferable skills**.

DEFINITION

There are different concepts and understandings what **transferable skills** actually are. The definition used for this tool is that of the International Labour Organisation (ILO 2007), which defines transferable skills as employable skills which can be used productively in different jobs, occupations and industries[1]. The essence of this definition is that transferable skills enable workers to access different types of employment opportunities and different forms of employment across different sectors. Figure 1 lays out the nuances of the ILO definition.

Other perspectives - from education specialists and education economists - define transferable skills primarily in terms of the competencies that enable individuals to apply themselves to a wide range of social and economic opportunities, not only related to accessing employment and advancing their professional careers, also with respect to successfully participating in society and the economy more generally. They focus on **foundational skills**, which include basic education in terms of numeracy and literacy, but also 'soft skills', such as the ability to think critically and innovate, interpersonal and social skills that typically refer to the ability to communicate effectively, collaborate and work in teams.

Foundational skills may also include more intrinsic competencies such as self-discipline and

[1] ILO (2007) *Portability of Skills*. Committee on Employment and Social Policy. Geneva: International Labour Office.

self-motivation, and the ability to learn independently and act with integrity.

ILO's more employment-focused definition of transferable skills distinguishes between core life skills and general vocational-technical skills:

• Core life skills

ILO's core life skills include (a) so-called 'traditional' core skills, such as literacy, numeracy, communication and social skills, as well as (b) 'new' core skills. The latter are described as cognitiv-analytical skills that support self-learning, creativity, innovation and independent decision-making. Arguably, social skills and 'new' core skills are what education specialists would refer to as 'sofft skills'.
(Note: the VET Toolbox Tool LIFE SKILLS AND WORK READINESS IN VET lays out further the rationale for strengthening these types of skills).

• General Vocational-technical skills

General vocational-technical skills are defined as skills that build on the standardization of products and processes, as well as the diffusion of similar technologies across different enterprises and sectors of an economy. This is why they are transferable.
In contrast to 'general' vocational-technical skills, there are 'specific' vocational-technical skills, which relate to particular jobs or firms and are considered less transferable. However, it is important to recognise that specific vocational-technical skills are typically built on the prior acquisition of general vocational-technical skills.

Figure 1: ILO Definition of transferable skills

Transferable skills:

Employable skills which can be used productively in different jobs, occupations, industries

(ILO 2007)

Core skills		Vocational/technical skills	
Traditional skills	'New' skills	Traditional skills	'New' skills
Communication and social skills e.g. ability to read, write, handle information and numbers, communicate with others, use computers, language skills, ability to interrelate to others, work in teams, motivate and demonstrate leadership, manage relationships, punctuality. (highly transferable)	**Learning, cognitive and personal skills** e.g. ability to analyse and solve technical and /or business-related problems effectively, using thinking skills and applying methodologies; ability to make judgements and take decisions; ability to acquire new knowledge, learn from experience, openness to new solutions and innovation. (highly transferable)	**Vocational/ technical and business knowledge that can be used in different sectors in an economy** e.g. skills that have become general as a consequence of standardization of products and processes and the diffusion of similar technologies between enterprises (includes HSE awareness and procedures). (highly transferable)	**Vocational/ technical and business knowledge that relates entirely to a particular job or are firm-specific** Workers typically acquire these skills in enterprises that are specialized in narrow product and service niches. (limited transferability)

TRANSFERABILITY ACROSS SECTORS AND/OR SKILLS LEVELS

In deciding which types of vocational-technical skills are relevant for which particular country/ regional/ or local context, it is helpful to considering whether transferability is sought across sectors or skills levels.

• Across sectors

Transferability across sectors can be understood in terms of asking whether there is (potential) demand for general vocational-technical skills upon which specialist skills are built. In some industries, technical and vocational professionals typically acquire their specialist knowledge on the back of general vocational-technical trades. For example, this is the case in the extractive industries (oil, gas, mining), where sector professionals often acquire their specialisms on

the back of initial training and work experience in trades such as civil engineering and construction, heavy machine operations, metal fabrication, mechanical engineering and electrical/ electronic/ mechatronic works.

Transferability across sectors can also be understood in terms of asking whether there are new technologies that are gaining in relevancy and, therefore, are becoming more widely used. For example, to produce on-grid and off-grid renewable energy requires knowledge and skills in installing and maintaining new technologies in a variety of geographic contexts, including urban and rural settings.

• Across skills levels

Transferability across skills levels is key to identifying the foundational basis of the core life skills required for workers and professionals to become skilled vocational-technical workers. To eventually become skilled workers and professionals, vocational-technical trainees need a certain basis of core life skills that enable them to embrace new technologies. For example, they need these skills to adapt to the consequences of digitalising production processes and service delivery. Similarly, the occupational remit of a vehicle mechanic has changed dramatically over the past couple of decades and is poised to change further as the automotive industry is moving toward electrification. This required that VET trained persons are equipped with sufficient core life skills to move with the time.

Transferability across skills levels is also relevant for identifying the pathways for upward occupational mobility via the vocational-technical route. For example, especially in Sub-Saharan Africa, many young people leave formal education after primary school or lower secondary school[2]. However, this is not where their acquisition of core life skills should end. Therefore, young people still need to be supported to strengthen core life skills throughout their early working life so that they can move up the skills ladder as their professional careers

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[2] Countries vary considerably in the number of school years associated with primary and lower secondary education and also in the mandatory school leaving age. Typically, the length of primary education varies from 4-7 years. In countries where primary education ends at year 7, this may also be the end of the legally mandated school age.

[3] In the ideal case, education and skills development systems are designed such that a highly skilled worker can achieve an educational level that is at par with university-trained professionals, or at least that he/she can enter university level training via a vocational-technical route, as opposed to a general-education based academic route.

progress. For example, they may be starting off as vocational-technical trainees with limited secondary education. But in order to become skilled trades persons and professionals, they need to be supported to acquire more core life skills alongside gaining practical work experience[3].

Figure 2 illustrates transferability across sectors and skills levels, using the UNESCO's ISCED-11 Standard[4] for the levels and the electrical trade as the practical example.

Figure 2: Examples of Transferability across Sectors and/or Skills Levels

EXAMPLE: ELECTRICAL WORK			CORE SKILLS		VOCATIONAL-TECHNICAL SKILLS			
			Traditional core skills	'New' core skills	General skills	Specialist skills	Skills that relate to new technologies	Job/firm specific skills
Transferability across sectors			Highly transferable			Transferable		Limited transferable
Transferability across skills levels	ISCED-11							
	6	Bachelors or equivalent	• Occupation-specific tertiary proficiency	• Electrical engineer (BA) • Electrical technician • Master electrician		• Experienced technician/ professional for plant electrics • Experienced technician for electrical environmental engineering	• Experienced electrical technician for solar power plants • Mechatronics technician	• LNG technician – electrical work
	5 4 3	Short-cycle tertiary education Post-secondary, non-tertiary Upper secondary education	• Occupation-specific upper secondary proficiency	• Certified Electrician, Electrical installator		• Industrial electrician, specialising in plant electrics, operations etc. • Industrial electrician specialising in HVAC	• Electrician specialising in solar/wind power • Electrician specialising in energy efficient HVAC	• Industrial electrician focused on LNG plant installations
	2	Lower secondary education	• Occupation-specific secondary foundational proficiency	• Trainee electrician		• Trainee industrial electrician	• Trainee electrician aware and familiarised with new technologies	• Electrical helper • Experienced electrical helper
	1	Primary education	• Primary foundational proficiency					

[4] Figure 2 refers to the first six of a total of eight ISCED-11 levels. ISCED stands for International Standard for the Codification of Education, of which the latest version was published in 2011. This Standard is provided by the United Nation's Education, Scientifica and Cultural Organisation (UNESCO), for the purpose of assembling, compiling, analysing and comparing data on education programmes and attainments. Many countries have their own national qualification frameworks which they map into the ISCED-11. The Standard can be found here: http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced-2011-en.pdf

POSSIBLE SCENARIOS

In the process of designing and targeting strengthening VET programmes, the following four scenarios may be taken into consideration:

1. Targeting primary and/or lower secondary school leavers

When primary and/or lower secondary school leavers are the target group for VET, it needs to be considered to what extent VET should still include strengthening core life skills alongside providing young people with vocational-technical skills. Training in core life skills should aspire to bring VET students up to the level where as vocational-technically skilled workers they can a) advance into higher value professional specialisms (with support from their employers), and/or b) embrace new technologies as these become more standardized. For example, solid core life skills will help a vehicle mechanic originally trained on manual combustion engines to re-train and adapt to repairing vehicles and machines with increasing digital contents, electric motors, sophisticated HVAC technology and so forth.

2. Targeting those with completed lower secondary education

If VET is targeted at those with completed lower secondary education, the focus should be on solid general vocational-technical skills in key occupations, so as to strengthen the basis upon which workers can acquire specific skills, including skills that relate to new technologies and/ or to specific jobs in particular types of firms. Efforts should be made to identify where the current provision of general VET is deficient in relation to potential demand. One of the questions to ask is whether VET providers have kept up with the use of technologies and work practices that have already (or are poised to) become standardized in the actual work environment, for example with respect to the 'greening' of existing occupations. Experience has shown that industrial employers are often already appreciative of workers bringing a sufficient level of core life skills (including health, safety and environmental awareness) and some vocational-technical knowledge. Given this basis, they are then often very willing to provide specialist in-house training using their facilities and machinery.

3. Targeting skills for emerging industries

Where the provision of skills training is associated with emerging industries, practitioners should ascertain whether and where there are commonalities and complementarities between the skills required by these industries and existing economic activities already carried out in the country. This would serve to identify and verify, if there are areas of specialism that might be worth introducing into the curricula of general VET for key

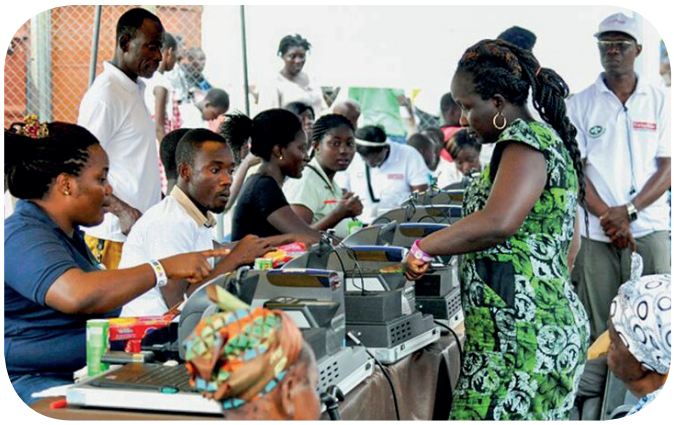
occupations. For example, if an emerging renewable energy sector is poised to increase the demand for plant electricians that are also demanded by the manufacturing industry or the conventional energy and mining sector, it could be worth considering to supplement the training of general electricians with a specialist training model on plant electrical work. Similar considerations may be considered for digitally-based goods and services.

4. Targeting skills development with focus on specific capital projects

Where VET is targeted at potential labour demand identified in association with specific capital projects - for example in the extractive industries or other natural-resources based industries, or the construction, the utilities and the infrastructure industries and adjacent sectors - practitioners should verify with relevant industry representatives at what depth general vocational-technical skills are required and how long (these representatives think) it takes to acquire the necessary practical skills. For example, an important question is whether it would be considered realistic that a short period of on-the-job training would suffice to enable generally trained VET graduates to resume sector-specific job roles. If this were deemed impossible, it could mean that the specific skills requirements are such that prospective jobholders would be expected to already possess (a) specialist vocational-technical skills, and/or (b) be familiar with non-standardized job or firm specific technologies, and/or (c) have previously held a similar job in the same industry.

EXAMPLES OF PROJECT/PROGRAMME CASES

PARTNERING WITH SAMSUNG ELECTRONICS IN GHANA

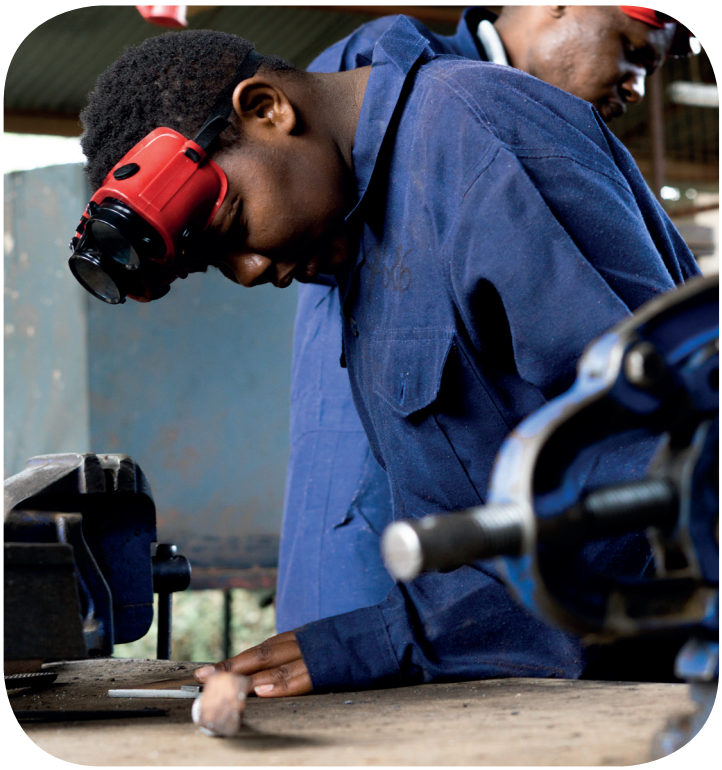


In Ghana, GIZ's E4D Programme partnered with Samsung Electronics, the South Korean International Development Agency, KOICA, and with the Ghanaian Council for Technical and Vocational Education and Training to implement a programme targeting women to be successful in selling, installing and servicing consumer electronics. This practically-oriented programme focused on general vocational-technical skills in electronics, as well as on sales, customer communications and entrepreneurial competencies and on after-sales servicing skills. Training providers were encouraged to provide trainees with immediate opportunities to put their learning into practice. As Samsung is expanding its African market, it has been keen

to draw on this pool of trainees to support its repair outlets. On the hand, the beneficiaries also received training that has prepared them to take up self-employment opportunities in the formal or informal economy.

i For more background and details on this case example, **see fact sheet**.

PREPARING MOZAMBICAN SCHOOL-LEAVERS AND DROP-OUTS FOR THE JOB MARKET



GIZ's E4D/SOGA Programme implemented comprehensive work readiness training in the northern region of Cabo Delgado, Mozambique, to impart transferable vocational-technical as well as core life skills to young people to prepare them for the job market. School-leavers and drop-outs graduates were offered basic general vocational training in electrical installation and maintenance, welding, rigging and hospitality, as well as core life skill training in areas such as communication skills, occupational hygiene and safety, personal finance, first aid, HIV awareness and several additional modules. The objective has been to equip beneficiaries with skills that would help them capture potential employment opportunities on the back of natural gas developments taking place in the region. Recognising the relevance of this training focus, GIZ has adapted and upscaled this approach for a similar programme delivered in Uganda.

i For more background and details on this case example, **see fact sheet**.

LIMITATIONS

The limitations of transferable skills are twofold: first, the demand for labour may be so limited, specific and/or short-term contract-focused that focusing on developing general vocational-technical skills would not make much of a difference to local hiring. However, transferable skills may nevertheless help beneficiaries to take up or improve their self-employment activities. Second, the gaps in traditional core skills may be so severe that companies do not want to contemplate investing in developing general vocational-technical skills. Instead, they may focus on training a small number of selected specialists with tertiary education, and/or invest in automation and digitalisation to reduce labour as a production input.

There is also a more fundamental limitation, highlighted by education experts. They have reached the conclusion that early acquisition of transferable core life skills has a positive impact on people's social and economic achievements in later life. They stress that acquiring these types of transferable skills should start from a very early age, because they shape people's opportunities throughout their later lives. And, they see children's early and primary learning experiences - taking place in the family environment as well as formal care and school settings - as an important conditioning factor for the extent to which transferable skills can be further strengthened during adolescence, young adulthood and later in life. In conclusion, pedagogical experts and education economist are strong advocates for investing in these skills from very early on, ideally with good quality early childhood learning. Essentially, they see less scope for making up for serious gaps in later life. That said, it is also recognised that, even if formal education is poor, children and youth may still learn valuable core life skills outside of the school setting, for example, when they are engaged in contributing to subsistence livelihoods.

VETToolbox

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Co-funded by the European Union