



SKILLS NEEDS ASSESSMENT

INITIATIVE OF THE TVET COALITION OF SIERRA LEONE

MARYAM DARWICH





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Text Maryam Darwich Afriqia HR Solutions www.afriqia-solutions.com

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Abbreviations and Acronyms

AC: Air Conditioner
AfDB: African Development Bank
CEO: Chief Executive Officer
CT: Computed Tomography
GIZ: Deutsche Gesellschaft für Internationale Zusammenarbeit
GPS: Global Positioning System
ISCO: International Standard Classification of Occupations
kVA: Kilo-Volt-Ampere
LPG: Liquefied Petroleum Gas
MDA: Ministries, Departments and Agencies
MEST: Ministry of Education, Science and Technology
NCTVA: National Council for Technical Vocational and other Academic Awards
SNA: Skills Needs Assessment
TOR: Terms of Reference
TVET: Technical Vocational Education and Training
UNDP: United Nations Development Programme
WaSH: Water, Sanitation and Hygiene

Key Definitions

A skill is defined as the ability – acquired through deliberate, systematic, and sustained efforts – to carry out a task with pre-determined results. In this context, we distinguish between soft skills and hard skills. Soft skills are a combination of interpersonal skills, social skills, communication skills, character traits and attitudes, among others that enable people to effectively navigate their environment, work well with others, perform well, and achieve their goals with complementing hard skills. Hard skills are therefore any skills relating to a specific task or situation like drilling, welding, soldering, planting, catering, making the beds, hairdressing, soap-making, etc.

The following definitions are all from the United Nations Educational, Scientific and Cultural Organisation International Centre's for Technical and Vocational Education and Training.

Formal TVET

"Training typically provided by an education or training institution, structured (in terms of learning objectives, learning time or learning support) and leading to certification."

Non-Formal Education and Training

"Education and training which takes place outside the formal system either on a regular or intermittent basis."

Informal Learning

"Learning resulting from daily life activities related to work, family or leisure. Informal learning is part of non-formal learning. It is often referred to as experience based learning and can to a certain degree be understood as accidental learning."



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Executive Summary

Initiated by the Technical Vocational Education and Training (TVET) Coalition of Sierra Leone and supported in its various implementation phases by both the United Nations Development Programme (UNDP) office in Sierra Leone and the German Corporation for International Cooperation (GIZ), this report assesses workforce skills and competencies in selected occupational areas, highlighted by the Research Working Group. The sectors under assessment have been combined under five headings:

- 1. Mining/Construction/Manufacturing
- 2. Health/WaSH
- 3. Energy
- 4. Tourism and Hospitality
- 5. Agriculture and Fisheries.

The above sectors have been identified by previous research (e.g. the 'Skills Gap Analysis for Private Sector Development in Sierra Leone') as strategic sectors having a high potential for economic growth and in turn room to provide employment opportunities.

This report clearly highlights skills and an overview of competencies required by employers. It should act as a point of reference to assist policy makers, training and education providers, both for the purposes of curriculum development and to better align their programmes according to the existing needs of the labour market. It also highlights the importance of regular engagement and discussion across the sectors and has provided various recommendations and points of collaboration that should be encouraged to create increased synergies.

Potential private-public sector partnerships and the different forms they can take have been encouraged as part of this report to ensure regular conversations that would aid in the continuous assessment and forecasting of labour market needs. In addition to providing up to date information on skills needs, and occupational areas presenting hiring challenges the report focuses on providing recommendations that would help facilitate the links and fill the gaps of quality provision and communication between the private sector, and training and education programmes.

The report offers an analysis of data captured from a two-phase research process. The first phase included the participation of 30 different companies (private, state-owned, parastatal), whilst the second phase involved in-depth analysis across 37 departments of 26 different companies across the five sectors. In total, across both phases, 67 questionnaires have been completed to provide the information represented in this research. The report has brought under discussion 50 occupational areas across the five sectors. It provides information on specific tasks and skills as well as information on the mechanisms implemented by organizations to ensure their own success in the face of challenges. The research findings can act as baseline for deeper analysis of industry specific themes and/or the basis of revision or development of existing training and educational programmes. Essentially, it should act as a major bridge in the communication gap between the supply and demand side by offering clear data to formal and non-formal trainers in the needs of the TVET labour market.

In general, the data has revealed employer challenges in filling vacancies especially within the technical level. Despite the availability in number, most candidates fall short due to limited skills and practical experience. Generally, employers do not feel like they are involved in what happens in training institutions with only 3% of those interviewed actually actively collaborating with training institutions. In the majority of cases, employers are focusing on their existing team or alternative hiring solutions to fill gaps within their establishments. Most, as a result of an increasingly distant education system, place little focus on qualifications and alternatively look at skills and experiences.

Despite these challenges, the research indicates a willingness and openness for collaboration from the private sector participants. This was highlighted through ideas of collaboration and cooperation that were thought of by them. Companies are currently investing time in professional development of their staff, primarily through on-the-job training, and they strongly recommended that students should participate in



such experiences in preparation for their employment. Recommendations deduced from analysis come as part of a holistic intervention that not only maximizes the benefit of existing activities in the sector but also encourages the participation of more parties in different ways to build the capacity and relevance of both institutions and graduates.

Key recommendations focus on potential avenues of partnerships and increased communication, on collaborative learning experiences that would be of mutual benefit to both the private sector and training providers, and with a focus on skills building as opposed to just certification, with in turn, a more open approach to the integration of the informal sector.

Introduction

The TVET Coalition of Sierra Leone

The TVET Coalition of Sierra Leone is an alliance composed of government institutions, training providers, international donors, private sector and (I)NGOs. Its overarching objective is to support the government in its mandate to improve the quality and employability of TVET graduates in Sierra Leone by aligning the demand with the supply of skills and competencies. In doing so, the Coalition also intends to create an environment that promotes the development of the private sector in Sierra Leone and positions the country as an attractive investment destination. The Coalition has four pillars to its work, networking, advocacy, image campaigning and research. This 'Skills Needs Assessment' is a TVET Coalition of Sierra Leone initiative.

The PPP Fund for Mano River Countries of GIZ

The GIZ's PPP (Public Private Partnership) Fund for Mano River Union Countries funded the finalisation phase of this 'Skills Needs Assessment'. It was initiated in 2010 by the German Federal Ministry for Economic Cooperation and Development (BMZ). The fund operates in the four Mano River Union (MRU) countries: Côte d'Ivoire, Guinea, Liberia, and Sierra Leone. The objective of the fund is to reduce risks. These risks include a lack of infrastructure, an insufficient number of skilled workers, legal uncertainty, a lack of competent local suppliers and service providers, as well as to improve the integration of businesses in the development agenda of these countries. In cooperation with the private sector, the PPP fund aims to foster employment, increase income levels, and improve working conditions for the local population. Youth and women are major target groups, as they constitute a large percentage of the underemployed population within the MRU countries.

Background and Context

Despite extensive research in recent years with a focus on the TVET sector, gaps remain in analysis and research that, if filled, could adequately and comprehensively feed into the necessary dialogue between employers and training providers to ensure regular communication and contribute towards a more relevant supply to the increasing demand. What all the most recent studies have in common, to consider a few, the 'Skills Gap Analysis for Private Sector Development in Sierra Leone' (2012), 'Situational Analysis Study of Technical Education and Training in Sierra Leone' (2015) and most recently 'Diagnostic Study of the TVET Sector in Sierra Leone' (2018), is a realisation of an evident gap between what TVET institutions are providing and what employers actually need. One of the gaps is lacking a widespread view of TVET as a lifelong learning process, which allows for the inclusion of formal, non-formal and informal training.

All research concluded that TVET graduates were not ready for employment upon completion of their TVET course. This was initially indicated in the African Development Bank's 'Skills Gap Analysis' and recently re-echoed in GIZ's 'Diagnostic Study'. It is clear "that there is a huge skills gap between the labour requirements of the private sector and the output from the education and training institutions¹".

¹ ICON/GEFAK Consortium. Diagnostic Study of the TVET Sector in Sierra Leone. March 2018. Pg. 36.



Whilst technical skills and their links to specific roles were clearly cited in research, there has not been a skills needs assessment that focuses on all areas of skills; those that can be both cross-sectorial, as well as sector specific; soft and hard. The narrow definitions of skills with a focus on technical skills have meant little room for growth and guidance that could allow for enhanced employability of TVET graduates. TVET should be dynamically adapted to the needs of the market and allow for an expansion of professional competencies. An excessive formality in the learning of specific technical abilities, although necessary, can lead to the development of curricula that does not respond to the requirements of economic agents.

Studies rarely are built with the vision of bridging a gap between employers and training providers in terms of concluding with key findings that would allow for increased synergy, collaboration and a common vision. Soft skills, although remaining to be absent and the cause of the repeated frustrations amongst employers, are usually given a secondary ranking in terms of focus in comparison to technical skills. This Skills Needs Assessment (SNA) focuses on filling these research gaps and should act as a complementary tool of analysis and a reference point for training providers as well as a platform to strengthen communication between both the supply and demand sides (private companies/training providers) of the TVET sector, in a broad perspective of it, including both formal and non-formal TVET. There is a clear current gap in regular data gathering in Sierra Leone with the intention of being utilized to strengthen communication and collaboration between educational institutions and employers. This SNA should be the beginning of just that.

Purpose and Scope

The SNA, initiated by the TVET Coalition of Sierra Leone shall on the one hand serve as a basic document for the Ministry of Technical and Higher Education (MoTHE), the National Council for Technical Vocational and other Academic Awards (NCTVA) and other relevant MDAs for the modernisation and upgrade of TVET curricula. It will on the other hand inform training providers about skills required by potential employers.

The SNA consists of two phases, both divided in their reach and purpose, and both encompassing key sectors brought out from the 'Skills Gap Analysis' and built on through the 'Diagnostic Study'. The Agriculture, Mining and Tourism sectors were highlighted from 2012 as priority sectors in the National Export Strategy and as those with the highest potential of generating employment. Added onto them are the Construction and Manufacturing sectors, which with expansion plans and the increasing need for development in the country have been facing growth. Similarly, the Energy sector compounded with the "Electricity Sector Reform Roadmap has mapped out an implementation of reform activities over a thirteen-year period"². The final sector, Health, will cover WaSH. This is especially pertinent with all the post-Ebola reform and investment that is still resulting in growth.

While HR managers were the respondents for Phase 1, technical supervisors were the respondents for Phase 2. Generally speaking, Phase 2 is the in-depth operational level analysis of the research concluded as a result of Phase 1.

Phase 1 key areas of focus:

- Mapping of the occupational areas needed by employers with a focus on those suitable for TVET graduates.
- Highlighting key challenges that employers face in accessing talent and integrating it into their existing workforce.
- Employers' perceptions and attitudes towards their workforce needs and the challenges they face in recruiting for their key roles and what steps they have taken, if any, to try to overcome them.

² ICON/GEFAK Consortium. Diagnostic Study of the TVET Sector in Sierra Leone. March 2018. Pg. 40.



Phase 2 key areas of focus:

- To provide a more in-depth analysis with a focus on bringing out in detail the skills gaps related to the roles highlighted in Phase 1.
- Create and communicate a clear idea of what professional competencies are actually needed in the work place (focusing on soft and hard skills), as well as include focus on attitudes and conceptual understanding. This is to encourage employers to be very specific with their needs to allow the research to provide specifics that would aid, guide, and contribute to curriculum development.
- Analyse and look into the recruitment and onboarding process of TVET graduates within different companies across the sectors to assess feasibility of programmatic expansion. In addition, advice on their potential integration within existing TVET courses to increase the employability and job readiness of graduates in an attempt to reduce the burdens new hires can bring on employers.
- Include and consider the contribution of non-formal TVET to better adapt trainees' competencies to the broad and dynamic needs of the market.

The combination of the two phases gives a holistic analysis that should not only provide guidelines for TVET curricula development but will also provide recommendations as to how the private sector and training providers can collaborate to ensure continued synergy and consultation whether within the TVET Coalition of Sierra Leone space or outside.

Methodology

The research behind the SNA was the result of three research periods that commenced in 2016, led and carried out by the TVET Coalition of Sierra Leone Research Working Group members at its inception, an external consultant reporting to the UNDP between the end of 2016 and beginning of 2017 and a finalisation consultant in May 2018, reporting to GIZ, after which it was finally concluded in July 2018.

Since one of the core pillars of the research is to advise and provide inputs for revising TVET curricula by looking at employer needs and challenges, focal areas of occupation were selected that were perceived to be specific enough for recommendation but neither too narrow nor too broad to make links to the existing curricula irrelevant. The International Standard Classification of Occupations (ISCO) of the International Labour Organisation (2012) was used as the basis for occupational classification and analysis.

The details that would create the curricula content contributions were left as specific as employers wished for them to be and are defined under tasks and skills needed. This micro and macro approach was specifically selected to ensure a level of depth and analysis that went beyond existing research.

The sample set for this study was chosen at random with a focus on sectoral activity. Phase 1 focused on companies as a whole whilst Phase 2 delved deeper and focused on departments, which meant that Phase 2 had multiple questionnaires from the same company across varied departments. The finalisation consultant, after assessing existing data gained from 2016/2017, chose to focus the final set of research on the following three sectors that were felt to have little representation:

- Agriculture
- Health
- Energy

In addition, their narrow definitions were expanded to include the following:

- 1. Health was broadened to include WaSH (Water, Sanitation and Hygiene) which also faced a direct growth in investment post-Ebola.
- 2. Energy, to move beyond a focus of just electricity and also include petroleum, gas as well as renewable energy.



Sector	Phase 1 Number of Companies	Phase 2 Number of Departments
Agriculture/Fisheries	5	5
Construction/Mining/Manufacturing	9	15
Tourism and Hospitality	6	6
Energy	5	6
Health/WaSH	5	5
Total	30	37

Table 1: Industries of Focus for the Skills Needs Assessment

Although not a sampling pre-requisite, the outcome was a representative sample that had **57% of companies interviewed based in Freetown and 43% based outside** Freetown, spread across a variety of locations, which included but was not limited to the following areas: Bonthe, Moyamba, Kambia, Port Loko, Tonkolili, Western Urban, Western Rural and Bombali. In terms of ownership status, **49% of the full sample are registered Foreign Private businesses whilst 43% are Local Private businesses**. The remainder are either of a government or semi-government status and were interviewed in the first round of interviews when the focus was not clearly indicated to be on the private sector.

Company sizes differed with 45% of those interviewed having between 50-249 staff, 31% having 10-49 staff, 14% with less than 10 staff and 10% having over 250 staff.

All interviews were conducted with the following people:

- General Managers
- Directors
- Owners
- CEOs
- Human Resources/ Learning and Development Managers
- Departmental Heads (Phase 2)

This was deliberate to ensure access to first-hand information on the industries' skills needs.

The report's recommendations and lens of analysis were directly captured from existing research in an effort to complement and build on all the existing data, highlight strengths within existing initiatives, strategic areas, and bring recommendations into tangible steps that can be implemented by all invested parties and stakeholders.

Questionnaires

Two questionnaires were conducted that were organised in a series of questions/sections.

The first questionnaire, referred to as Phase 1 (Annex 1) was organised in the form of six questions that focused on the following:

- Details (name, location, contact details of point of contact).
- Characteristics (size identified by number of employees distributed by gender and general occupational level).
- Technical Staff Profiling in the form of certificates gained (distributed by gender and certificate level).
- TVET occupational areas in demand.
 - Hiring challenges and solutions for "difficult to find" occupational areas.
 - Applicant selection criteria and assessments.



The second questionnaire, referred to as Phase 2 (Annex 2) was organised in the form of four sections:

- Section 1 focused on details (name, location, status in terms of ownership, sector).
- Section 2 focused on abilities and skills of existing staff with a mixture of quantitative and qualitative questions that focused on occupational specific tasks and various skills according to departmental need. Using open-ended questions, interviewees were encouraged to highlight specific professional/technical skills linked to certain tasks, soft skills for effective performance and list tasks where availability of able staff is limited. Through a series of questions, they were also asked to indicate some of the potential leading causes for inabilities to carry out tasks. The section concluded with a question regarding what advice can be given to TVET institutions to help with the improvement of quality and standards of TVET graduates.
- Section 3 focused on training, looked at different methods of training, barriers to training, and encouraged respondents to come up with ideas for collaboration with TVET institutions. These would be ideas that they would be happy to support and implement.
- **Section 4** addressed how new vacancies were recruited for and looked at avenues which are taken to fill vacancies, difficulties faced in filling vacancies, reasons behind challenges and steps taken to cope in the absence of suitable hires.

During the finalisation of the research, when Phase 1 and Phase 2 existing data was analysed, it became apparent that some questionnaires were left to be entered/filled by the respondents independently. Whilst this may have reduced research time, it has created gaps in the content available. These gaps, in some cases, have meant a lack of the necessary detail to allow for analysis.

To allow for maximum information in the final stage, the last 20 questionnaires were conducted in the form of face-to-face interviews to ensure the following:

- 1. Rapport building that would allow the respondents to give the depth of information needed to allow for the needed content to ensure a high level of analysis.
- 2. The ability to probe and clarify, if needed, any of the questions.
- 3. To ensure communication is taking place with the correct individual, as opposed to it being handed over to another member of staff to complete with little concern for accurate reflection.
- 4. To ensure full attention of the respondent and to create engagement which is proven to increase both investment and contribution.

It is important to note that responses were captured in the same way they were articulated by the interviewee.

Analysis

The findings of the SNA have been directly captured from the research. The lens of analysis described in this report took place both at phase level, as well as through combined lens, both sectoral specific as well as cross sectoral with a focus on the areas absent from previous research.

In addition to mapping and highlighting challenges, the analysis of data has provided recommendations that would allow for insight and improvement in the following areas:

- The competencies demanded by the specific sectors pulling out patterns within and across.
- Employer specific recommendations for TVET institutions.
- An insight into the various onboarding training processes that employers take new staff through and how they could be integrated into TVET curriculum to increase employability prospects.
- Existing collaboration, if any, with TVET institutions and recommendations as to how it can be strengthened and improved on.
- An oversight into existing recruitment processes to encourage TVET institutions to integrate job preparedness and training into their institutions.
- Entrepreneurship education and training in light of an increasing viable option of self-employment for TVET graduates.



The contents of this report went through a validation workshop, funded by Welthungerhilfe (WHH), which had the following key outcomes:

- 1. The SNA is validated.
- 2. An opportunity for stakeholders to reflect on findings and discuss the role of the SNA recommendations within a wider framework of strategic development is provided.
- 3. The methodology and approach as part of a sustainable form of TVET capacity building and monitoring is discussed.
- 4. The role of the TVET Coalition of Sierra Leone in collaboration with the newly elected government is discussed.
- 5. A space where suggestions to aid in bringing together private sector and TVET institutions as per the SNA recommendations with specific focus on potential policies is provided.

Limitations to Research

The fact that the SNA faced a gap in analysis and research with the majority of questionnaires being conducted in 2016, whilst the final phase was conducted in 2018, could raise question marks about the relevance of some of the findings. The validation workshop and any recent TVET sector developments were used to address this gap and there were no disagreements regarding final conclusions and recommendations.

In addition, a large number of questions regarding specific tasks and skills were open-ended and, especially on analysis of the 2016/2017 data, did not always provide the desired level of detail nor did they address the questions through the expectations or the definitions of the research. This information was not eliminated but elements of it, research relevant, have been incorporated into this research's findings when they were deemed useful and relevant to policy makers, TVET institutions and/or job seekers. In addition, any occupational tasks/areas were aligned as best as possible with the ISCO-08 classification. It must be noted that the absence of skills mentioned, whether technical or soft, does not mean that they should be given any less importance when education and training programmes are designed in response to this research. Employers highlighted their subjective core areas of focus and could not comprehensively outline each and every single one. However, patterns pulled out indicate clearly where more work needs to be done on a training and education level.



Findings

Industry Overview

Certain patterns emerged out of Phase1 questionnaires that displayed both staffing patterns as well as gender-based disparities.

Technical staff made up 51% of all companies interviewed. There were differences amongst the sectors that could be used to indicate TVET employment opportunities within these sectors:

- The highest technical representation of technical staff was within Agriculture and Fisheries where 76% of roles were considered technical in nature.
- Technical staff accounted for 66% within Health/WaSH, 43% within Construction/Mining/Manufacturing, 36% within Tourism and Hospitality and 27% within Energy.

Clear gender disparities also came out of the industry overview analysis, as displayed in the diagram below, with key industries (Energy and Construction/Mining/Manufacturing) having nine men to every woman in their staffing pool and the Agricultural/Fisheries industries with a sixteen to one difference; to every sixteen men employed with a TVET qualification, there was only one woman. Qualification gender disparities were also present and show gaps in female participation in courses/certifications within specific sectors (especially Energy and Construction/Mining/Manufacturing).

Table 2: Gender Analysis both in Staff Numbers and Qualifications gained across the Key Areas of Industry

Industry	Men/Women Staff Ratio	Men/Women Qualifications Ratio
Energy	9:1	16:1
Health/WaSH	1:1	1:1
Construction/Mining/Manufacturing	9:1	8:1
Tourism	1:1	1:1
Agriculture/Fisheries	16:1	2:1

Key TVET Occupational Areas Needed

The following occupational areas were highlighted by the SNA as the most required TVET areas by employers questioned.

Table 3: Occupational Areas by Sector, indicated as im	portant by Employers
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Occupational Area	Energy Sector	Mining/ Construction/ Manufacturing	Health/ WaSH	Tourism/ Hospitality	Agriculture/ Fisheries	Total
Building and Related	4	1	1			6
Electricians	r	1	1			0
Receptionists and				4	1	F
Information Clerks				4	1	5
Accounting and		1	1	1	1	4
Bookkeeping Clerks		1	1	1	1	Ŧ
Waiters				4		4
Accountants	1	1	1			3



Occupational Area	Energy Sector	Mining/ Construction/ Manufacturing	Health/ WaSH	Tourism/ Hospitality	Agriculture/ Fisheries	Total
Solar Installation/ Technicians	3	<u> </u>				3
Nursing and Midwifery Professionals			3			3
Electrical Engineers		1	1		1	3
Air Conditioning and Refrigeration Mechanics		1		1	1	3
Sheet Metal Workers		3				3
Cooks				2	1	3
Agricultural and Industrial Machinery Mechanics and Repairers	2	1				3
Advertising and Marketing Professionals	1				1	2
Carpenters and Joiners		1	1			2
Bricklayers and Related Workers		1	1			2
Mineral and Stone Processing Plant Operators		2				2
Chemical Engineers		2				2
Mechanical Engineers		1			1	2
Agronomists and Related Professionals					2	2
Gardeners: Horticulture and Nursery Growers Electrical Mechanics	-	-			2	2
and Fitters	1	1				2
Computer Assistants Environmental and	1					1
Occupational Health Inspectors and Associates	1					1
Medical Equipment Operators			1			1
Medical and Pathology Laboratory Technicians			1			1
Community Health Workers			1			1
Business Services and Administration			1			1
Earthmoving and Related Plant Operators		1				1



Occupational Area	Energy Sector	Mining/ Construction/ Manufacturing	Health/ WaSH	Tourism/ Hospitality	Agriculture/ Fisheries	Total
Cartographers and Surveyors		1				1
Mining and Metallurgical Technicians		1				1
Plasterers		1				1
Steam Engine and Boiler Operators		1				1
Welders and Flame Cutters		1				1
Dieticians and Nutritionists			1			1
Plumbers and Pipe Fitters		1				1
Housekeepers and Related Workers				1		1
Technical and Commercial Sales Representatives					1	1
Meat and Fish Processing Machine Operators					1	1
Fishery and Aquaculture Labourers					1	1
Farming, Forestry and Fisheries Advisors					1	1
ICT Technician				1		1

Only 30% of employers interviewed believed that there were no qualified Sierra Leoneans available to fill the above occupational areas.

Difficult Hiring Areas

Table 4: Difficult to recruit Occupational Areas

Occupational Area	Energy Sector	Mining/ Construction/ Manufacturing	Health/ WaSH	Tourism/ Hospitality	Agriculture/ Fisheries	Total
Electrical Engineers	16	12				28
Receptionists and Information Clerks	4			17	5	26
Advertising and Marketing Professionals	5		5	6	5	21
Agricultural and Industrial Machinery Mechanics and Repairers	5	8		6		19
Accounting and Bookkeeping Clerks	4		6	4	5	19
Waiters				18		18



Occupational Area	Energy Sector	Mining/ Construction/ Manufacturing	Health/ WaSH	Tourism/ Hospitality	Agriculture/ Fisheries	Total
Farming, Forestry and Fisheries Advisors					16	16
Cook				15		15
Plumbers and Pipe Fitters	3	3	6		2	14
Accountants	8		2	3		13
Business Services and Administration	2		8	3		13
Information and Communications Technology Installers and Servicers				7	6	13
Solar Installation/ Technicians	11					11
Nursing and Midwifery Professionals			10			10
Dieticians and Nutritionists		6	3			9
Cartographers and Surveyors		9				9
Chemical Engineers		9				9
Restaurant Managers				9		9
Welders and Flame Cutters	4	4				8
Plant and Machine Operators and Assemblers		7				7
Medical Equipment Operators			6			6
Medical Doctors			6			6
Carpenters and Joiners		1	5			6
Car, Taxi and Van Drivers			3		3	6
Sheet Metal Workers		6				6
Mining Engineers, Metallurgists and		6				6
related professionals Electrical Mechanics and Fitters		6				6
Building and Related Electricians		4		2		6
Agronomists and Related Professionals					6	6
Meat and Fish Processing Machine Operators					6	6



Occupational Area	Energy Sector	Mining/ Construction/ Manufacturing	Health/ WaSH	Tourism/ Hospitality	Agriculture/ Fisheries	Total
Fishery and Aquaculture Labourers	r -			ſ	6	6
Productions and Operations Depart- ment Managers in Manufacturing	5					5
Medical and Pathology Laboratory Technicians			5			5
Air Conditioning and Refrigeration Mechanics		5				5
Plasterers		5				5
Steam Engine and Boiler Operators		5				5
Sales and Marketing Managers				5		5
Odd Job Persons				5		5
Web and Multimedia Developers				5		5
Mechanical Engineers					5	5
Environmental Engineers					5	5
Bricklayers and Related Workers			4			4
Crane, Hoist and Related Plant Operators		4				4
Ships' Deck Officers and Pilots					4	4
Geologists and Geophysicists		3				3
Mining and Minerals Processing Plant Operators		3				3
Housekeepers and Related Workers				3		3
Stock Clerks					3	3
Technical and Commercial Sales Representatives	1					1
Underwater Divers					1	1

The SNA also asked employers to state the areas in which they had difficulty recruiting skilled and/or qualified Sierra Leoneans. The table above displays a compilation of their responses within occupational areas, across the key areas of study. The total is based on a scoring system that factors in the order in which they listed their hiring challenges (indicating the most difficult and the least difficult). This question, when asked to employers, did not confine the employer's response to the TVET sector. The implications of the findings above are not only interesting to TVET institutions but to all education and training institutions in Sierra Leone.



To address their hiring problems, 56% of employers said they trained staff to build-up capacity to fill these gaps whilst 15% opted to hire internationally. Other ways of tackling hiring challenges mentioned by employers were to:

- Outsource that specific occupational area to specialist companies.
- Bringing in short-term foreign or local consultants to fill the gap and potentially train a member of the team.
- Select staff with potential from trainings led by either internal or external experts.

Smaller businesses tended to be most impacted because of the cost of some of the alternative solutions and in turn it usually meant either a reassignment of responsibilities between the core team or the business owner themselves personally taking on the onus of that specific occupational area until an affordable solution presents itself.

There is no doubt that policy that directly aims to tackle these hiring challenges, across the sectors, will not only benefit existing businesses and job seekers but in turn would create an environment where small businesses are more likely to succeed. Their core occupational areas would have locally available trained and qualified personnel to fill the gaps and in turn help their business grow. Through analysis of the questionnaires, it is clear that for the majority of the highlighted roles, there is a consensus as to the availability of Sierra Leoneans within the occupational areas. That said, they do not have the ideal profile to fill the role with the qualities and skills needed for effective task management and implementation.

Industry Specific Skills Analysis

The following skills were highlighted as important through the Phase 2 questionnaire with department heads. They were perceived to be important professional/technical skills that were necessary for staff to enable them to effectively perform their tasks. They were not highlighted as skills that were unavailable in the labour market but as skills needed for effective implementation of tasks within the occupational areas explained in the previous tables. Unfortunately, the questionnaires did not encourage employers to link skills with key occupational areas but rather to areas of industry hence the representation below.

Professional/ Technical Skills

Agriculture/Fisheries

- Specialised agronomical skills.
- Knowledge of the sequence of seed production.
- Seed production, processing, storage and marketing.
- Fish cutting.
- Fish smoking.
- Fish packaging.
- Fish scraping.
- Fish filleting.
- Fishing styles knowledge to enable for the capture of a variety of fish types.
- Boat knowledge.
- Business management.
- Sizing and amp knowledge of electrical wires.
- Knowledge of compressors.
- Knowledge of different kVA generators.
- Refrigerator fan knowledge.



Construction/ Mining/ Manufacturing

- Mineral processing knowledge.
- Metallurgy.
- Ability to carry out repairs on process plant equipment.
- Welders need to be able to design and cut according to specified designs.
- Electricians should be able to work on high voltage motors within industrialised environments.
- Knowledge of identifying sampling anomalies.
- Mineral exploration and mining grade control experience.
- Knowledge of reverse circulatory drilling.
- Knowledge of anger drilling.
- Geological field mapping and sampling.
- Experience and skills within construction generally and road construction works specifically.
- Installation and maintenance of various types of piping.
- Ability to pour, smooth and finish concrete work.
- Ability to install rebar wire to strengthen concrete.
- Knowledge and ability to maintain a controlled electricity flow.
- Knowledge and ability to use the following equipment:
 - o Leica Geosystems Total Stations
 - o Tremble GPS
 - Handheld GPS
 - o Dumping Level
 - Use of various software equipment.
- Shaping sheet metal.
- Teller dent repair.
- Use of bench vice.
- Use of measuring tools, scales, callipers, micro meters, etc.
- Ability to diagnose and repair electrical components.
- Basic geological skills.
- Ore identification.
- Basic science knowledge to complement all areas of study.
- Ability to handle emergencies with knowledge of standard emergency responses and operating procedures within the sector.

Tourism and Hospitality

- Knowledge of cashiering.
- Knowledge of night auditing.
- Experience and knowledge of waiting which includes food and drinks serving i.e. knowledge on how to open a bottle of wine, mix a cocktail, etc.
- IT literacy.
- Strong acquisition of the English language for customer engagement and service.

Energy

- Ability to overhaul cylinder heads for diesel and thermal engines.
- Maintenance of auxiliary equipment.
- Electrification.
- Cable sizing.
- Electrical control systems.
- Understanding of load analysis, sizing systems and installation.



- Estimation and preparation of bills of quantity.
- Understanding of electrical ratings.
- Refrigeration/air conditioning maintenance.
- Knowledge of electronics.
- Solar installation knowledge.
- Electrical installation knowledge.
- Solar project design.
- Liquefied Petroleum Gas (LPG) knowledge.
- Understanding of the concept of the fire triangle.
- Boiling liquid expanding vapour explosion and what it means LPG.
- Pump house and motor maintenance experience.
- Understanding of transactions and related vouchers to ensure effective entries into financial systems.
- Knowledge and application of procedures, protocols and policies in relevant areas.
- IT skills.

Health/WaSH

- Knowledge of regulatory voltage flow (electricity supply).
- Ability to keep a check on input/output flows.
- EMAS drilling knowledge.
- Knowledge of procurement and purchasing.
- How to measure and value quantities basic abilities i.e. accurately using a tape measurer.
- Knowledge of plastering.
- EMAS storage tank construction knowledge.
- Record keeping.
- Business management.
- Financial management.
- Training on medical equipment with a focus on ultrasound machines.
- Medical laboratory technical skills.
- Knowledge and experience in the process of blood withdrawal.
- Knowledge of intermuscular injections.
- Ability to put IV lines.
- Ability to carry out accurately height and weight readings for patients.
- Ability to calculate drug dosages.

Challenging Industry Specific Tasks

When asked to elaborate on the tasks carried out by their staff, **86% of employers said that there were tasks currently carried out by their staff that new hires would be unable to perform**. Some even went on to say that the quality to which these tasks are currently carried out leaves significant room for improvement, hence **89% offering trainings to their existing staff to fill these gaps over the last two years**.

Below are industry specific lists of tasks that appear challenging and skill sets that are lacking with staff, according to employer feedback.



Agriculture/Fisheries

- Specialised agronomical skills.
- Specialist fishing techniques.
- Ability to research and present findings regarding industry specific innovative techniques.
- Generator maintenance.
- AC maintenance.

Construction/ Mining/ Manufacturing

- Grade control.
- Sampling.
- Lab simulation test work.
- Carrying on repairs on modern plant equipment.
- Machine diagnostics.
- Surface sediment mapp<u>ing</u>.
- Mapping out surficial features in developing ore bodies.
- Operation of drill rigs.
- Mining geology.
- Geological exploration and construction.
- Tile cutting.
- Concrete works.
- Steel works.
- Mason mixing.
- Earthworks operations.
- Proper installation of piping.
- Ability to install and control electricity flow.
- Proper pouring, smoothing and finishing of concrete work.
- Ability to assemble, install and repair boilers, closed vats, vessels and containers.
- Knowledge and ability to use the following equipment:
 - o Leica Geosystems Total Stations
 - Tremble GPS
 - o Handheld GPS
 - o Dumping Level
 - Use of various software equipment.
- Use of automobile diagnostic tools and equipment.
- Rebuilding of electrical components.
- Sanding down/ preparing body work.
- Matching and mixing colours.
- Ore sampling for lab testing.
- Operation of modern quality monitoring equipment including but not limited to water, air and soil.
- Occupational health and hygiene monitoring.

Tourism and Hospitality

- Preparation of new food menus.
- Use of laundry equipment.
- Knowledge of hotel software systems.
- Front desk operations.
- Food and beverage operations.
- Using point of sales' systems to put in orders.



- Cocktail making.
- Utilising software and understanding of procedures for guests check in.
- Carrying out night audit reports.

Energy

- Auxiliary servicing.
- Thermal plant inspection.
- Complex electrical control systems.
- System design.
- Installation of systems.
- Correlating and analysing GPS tracking systems.
- Safety procedures: initiatives and implementation
- Management of security surveillance.
- Breakdown maintenance assistance.
- Drafting letters and emails.
- Excel knowledge.
- Effective navigation and utilisation of accounting software.
- Filling/ document management.
- Bank relationship building, and an understanding of charges involved with letters of credit.
- Marketing product knowledge.

Health/ WaSH

- Knowledge of using advanced lab equipment including but not limited to Beckman Coulter.
- Ability to use advanced diagnostics machines including Digital X-rays and CT scans.
- Ability to take vital signs, accurate height and weight readings and capacity to accurately document and detail patient information on medical sheets.
- EMAS drilling.
- Knowledge of pumps.
- General house plumbing skills.
- Waste disposal- production line knowledge.
- Finance management.

Potential Explanations for Inability to carry out tasks

Employers were asked to elaborate on some of the potential reasons why staff are unable to carry out certain tasks. They were given a number of options from which they could select all relevant explanations.

Table 5: Employer Analysis of leading Causes behind poor Task Implementation (in %)

Potential Explanation	Employers Indicating it as a reason (%)
Lack/ Limited Job Training	68
Limited Skills	65
Lack of Experience	57
Newly Hired	32
Limited Capacity to Learn	27
Lack of Motivation	14
Wrong Recruitment	14
Frequent Changes in Jobs	8



Other reasons mentioned included:

- Absence of needed courses such as the lack of metallurgy training available.
- The unavailability of relevant training at schools which creates a group of certified but nonequalified job seekers.
- The lack of equipment for hands on training due to limited necessary equipment. This was previously highlighted as part of the 'Diagnostic Study' which highlighted that "with the exception of extraordinary donations, the equipment in <code>[TVET</code> institutions'] workshops and laboratories is very old, technically outdated, only partly usable, and with little or no relevance for the technical skills demanded by the market³".
- Irregular performance management that would actually assess training needs and contribute to building sustainable and effective learning and development plans.
- Limited technical knowledge that would act as a base for effective training. This was especially highlighted by interviews within the Health and WaSH sector where employers indicated that certificates did not mean consistent exposure to certain core areas of study. This has meant a very varied pool of job seekers who in the majority of cases do not have the basics required for their occupational area to allow for the on the job training to be of benefit.
- The seeming lack of desire among staff to work beyond a certain point. This did not necessarily indicate an impediment or knowledge-based deficit for why tasks were not carried out but rather a lack of desire to go beyond what is perceived as duties and responsibilities. This could be linked to attitude and/or motivation.

Soft Skills – Cross Industry Analysis

The report focused on creating a comprehensive competency profile, which included the capture of required soft skills. Despite limited patterns in technical skills, the soft skills captured by the research clearly allowed for patterns and similarities to be gained.

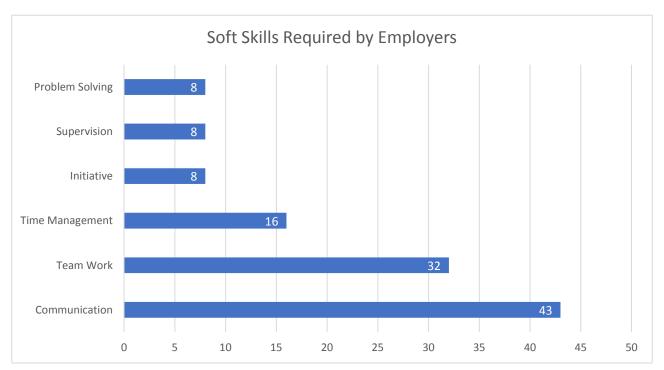


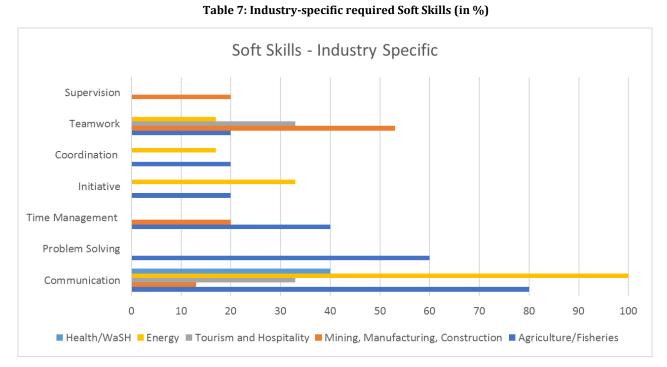
Table 6: Required Soft Skills for effective Performance (in %)

As seen in the diagram above, across the five industry areas of analysis, six key soft skills came out of the research as being of importance to employers.

³ ICON/GEFAK Consortium. Diagnostic Study of the TVET Sector in Sierra Leone. March 2018.Pg 63.



- 1. Communication for the purpose of this analysis will be used to refer to an employee's ability to speak clearly and effectively with the rest of his/her colleagues both junior and senior to him/her; listening; use of appropriate and work suitable body language as well as presenting oneself to others in various settings and forms (face to face, meetings, phone calls, email) in a positive manner, positively reflective of both the individual and their place of employment.
- 2. *Teamwork* was highlighted by employers as another important soft skill to possess. This was seen through the lens of not only teamwork and participation in team activities but also leadership and management of teams for effective task management and implementation, as well as team building and motivation in the face of struggles and challenges.
- 3. *Time Management* was discussed for the purpose of this skills needs assessment with not only a focus on time consciousness but more importantly in personal management to ensure duties are performed in a timely manner and with the existence of an independent ability that allows/encourages prioritisation and multi-tasking to ensure tasks are completed efficiently and effectively with no delays.
- 4. Initiative was discussed repeatedly in interviews, attached with specific cases and examples of its minimal presence in the workplace. Accompanied descriptive words such as self-starter and displaying ownership were used to explain the desire to have staff that act and are "go-getters". Staff who understood that their contributions should not be mechanical but should be centred around a desire to do the work at the best of their ability and in turn think of steps to continuously improve systems and get results done.
- 5. Supervision (also commonly attributed to leadership qualities) was described through the lens of direction/coaching/guidance as well as an understanding of responsibility and task management.
- 6. *Problem Solving* can be linked to decision making qualities and it is used in this research to refer to resourcefulness in the face of challenges. It is also linked to the ability to both mitigate risk as well as having the ability to resolve unexpected issues as they arise.



Soft Skills - Industry Specific Analysis

Although highlighting similar soft skills needed for workplace success, the industry areas under investigation gave different weight to certain soft skills as presented above.



Other soft skills mentioned by employers included:

- Ability to work under pressure
- Positive work ethics
- Planning
- Attention to detail
- Analysis/exploration/investigation
- Motivation
- Behaviour change encouragement
- Focus
- Commitment
- Networking
- Professionalism

In addition, 24% of employers interviewed specifically indicated the need for investment in English language training as part and parcel of stronger and more effective communication in the workplace. 24% of employers also indicated a need for a more IT conversant workforce.

Others also indicated the importance of basic numeracy and literacy for all staff as well as more confidence and fluency with local languages.

Private Sector Responses to Training Needs and Skills Gaps

Employment and training plans are a strong element of the Local Content Agency Act (2016) which strongly stresses the importance of training to ensure local hiring. In the absence of immediate availability, employers are asked to work on robust employment and training plans. Private sector responses analysed within this report strongly indicate an investment into capacity building to ensure sustainable hiring solutions.

"Where citizens are not employed because of lack of training, an operator or contractor shall ensure, to the satisfaction of the agency, that every reasonable effort is being made within the reasonable time to train locally" 57 (2) Local Content Agency Act.

56% of employers responded to staff challenges by conducting various trainings in the last two years. The focus of such trainings was predominantly professional and technical skills with 70% of respondents confirming that they carried out such trainings in the last two years.



Table 8: Employer-led Trainings over the last two Years (in %)



It is clear from the investment in training both appearing in the Phase 1 and Phase 2 questionnaire analysis, that these trainings were a response to both difficulties in hiring (implemented as part of hiring solutions) as well as an attempt to fill skills gaps in key occupational areas.

In addition to technical trainings, employers conducted trainings focused on skills needed for effective workplace performance. These included but were not limited to communication skills building, team building and business management. In the world of increasing access to technology, IT training was also carried out by 19% of employers.

Both for practical purposes and to reduce cost, 76% of employers/departments conducting training, carried them out on-the-job as part of mentorship, coaching and supervision activities. 32% indicated support received from their suppliers of technology and some of the Energy sector respondents, within the Renewable Energy sector, confirmed that when foreign suppliers of technology come for various trainings, they did not only open trainings up to staff but to anybody interested. This was to increase awareness at all levels of society of how technological advancements and tools can alleviate daily life stresses through tangible and practical solutions.

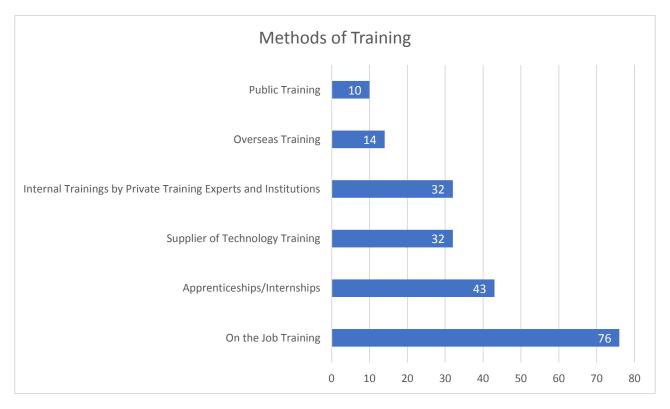


Table 9: Methods of Trainings utilized by Employers over the last two Years (in %)

It is important to note that only 35% of employers interviewed had budgets allocated for training. This indicates that not all trainings are financially burdensome nor are they necessarily part of planned staff learning and development activities. They seem to be responsive-, opportunistic- and needs-based.

Although all employers interviewed expressed a desire to continuously invest in staff training, 86% indicated there were barriers to their ongoing training to staff. Only 14% of employers interviewed indicated that they have no barriers to continuous staff training.



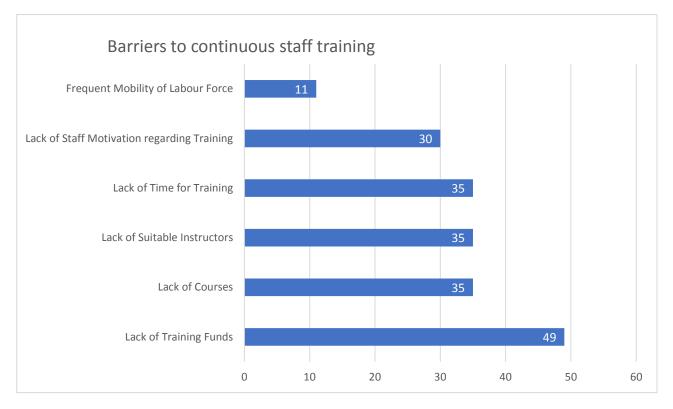


Table 10: Employer-indicated Barriers to continuous Staff Training (in %)

Other barriers to continuous training indicated by research included but were not limited to:

- Lack of extra equipment and material to conduct trainings. This was especially highlighted by small businesses who explained that materials and equipment tended to be purchased/procured around certain projects. There is no excess material available for them to use to allow staff to build capacity when there are no contracts/projects being undertaken. Within the WaSH sector, SMEs are also renting equipment when undertaking certain projects, this means that they do not have some of the necessary tools available in-house to ensure staff access and staff development.
- Lack of relevant and practical courses. Employers were not interested in investing in their staff's accumulation of theoretical knowledge. They wished for relevant practical courses incountry that would allow for staff to increase on their practical skills and in turn benefit themselves in the long run.
- **Poor staff retention**. Employers explained that previous investment in trainings has not always had a positive impact on staff retention. Due to a limited pool of skilled employees, companies explained that especially where there is an abundance of similar businesses, investment in staff has usually meant them pursuing higher salaries elsewhere. This resulted in a low level of confidence to invest in staff development in a climate of uncertainty over their career decisions. This in turn could mean that employees are investing in short term immediate needs training as opposed to a long-term sustainable learning and development plan.

Recruitment and Assessment Processes

In the area of recruitment, despite a common perception that hiring is generally a relations game, within the industry areas analysed where technical skills are important, a different pattern of recruitment emerges. As seen in the table below, only 6% of employers indicated that their vacancies are usually filled through acquaintances, relatives and friends. The majority of respondents either had processes that included public advertising or in-house promotions and recruitments.



Table 11: Employer Responses regarding how Vacancies are filled (in %)

Process	Employers (%)
Newspapers/ Websites/ Job Portals	25
In-House Recruitment	19
Promotion	17
Education/Training Institution	14
Acquaintances/ Relatives/ Friends	6

Other methods of vacancy filling included:

- Utilising social media Facebook and WhatsApp.
- Collaboration with recruitment consultancies.
- Attendance to job fairs.
- Selection from internal trainings open to interns/students.
- International hires based on investor recommendations or partnerships with international consulting firms.

When asked to rank what is looked for in job seekers in terms of criteria, employers on average used the following order of qualities (1 being the most important, 5 being the least important):

- 1. Practical Skills
- 2. Work Experience
- 3. Attitude
- 4. Graduation Certificates
- 5. Grades

In terms of applicant assessments, clear patterns and preferences emerged in how employers assessed the suitability of a certain candidate for a job.

- 83% of employers conducted interviews as part of their hiring process.
- 59% of employers carried out knowledge tests/practical tests and or psychometric tests as part of their selection process.
- 22% of employers did not officially offer staff a job until their probationary periods were completed. These ranged in length from two weeks to three months.
- 10% of employers stressed the importance of references.
- 3% of employers assessed hires as part of an internship process after which staff were confirmed.

The majority of respondents used a variety of complementary methods that at least factored two of the above areas.

51% of respondents described challenges and difficulties attributed to filling vacancies. Clear patterns emerged when exploring the reasons behind some of these hiring challenges with 95% of all interviewed explaining hiring difficulties to the lack of relevant and required work experience.

Reasons behind Hiring Challenges	Employers (%)
Applicants lacking relevant/required work experience	95
Applicants lacking technical or occupational skills	79
Applicants lacking educational qualifications	42
Lack of career development paths in certain roles	26

Table 12: Employer Explanation of Reasons behind Hiring Challenges (in %)



Applicants unwilling to accept offered wages and/or working conditions	11
Low number of applicants for certain roles	11

On the occasion where roles remained unfilled, employers were asked to indicate what some of the coping mechanisms used by them have been. The table below highlights coping mechanisms indicated by employers to help them alleviate the challenge of unfilled vacancies.

Table 13: Coping Mechanisms used by Employers to address unfilled Vacancies (in %)

Coping Mechanism	Employers (%)
Training of Existing Staff	68
Usage of Temporal Labour	30
Overtime Payments	27
Enhancement of Recruitment Procedures	22
Improvement of Incentives	19
Hiring a less qualified applicant	16
Outsourcing to other companies	14
Increase of Salary and Benefits to make role more attractive	11
Investment in Technology	8

Other coping mechanisms utilised included but were not limited to:

- Increasing encouragement and motivation of staff to ensure that they take on added responsibilities to fill gaps.
- International hiring options.

In small businesses where neither funds nor personnel could allow for some of the above coping mechanisms to be implemented, small business owners had to personally take on that responsibility until a suitable hire emerged. This was non time specific and placed a huge burden on small business owners both physically and in terms of time allocated to be a technician as opposed to a business owner.

TVET Institutions and Private Sector Relationships

Employers were asked as part of the Phase 2 questionnaire to give both advice for heads of TVET institutions as well as devise potential ideas for collaboration between them and the institutions. There was very little difference in terms of content of both questions with overriding themes becoming very apparent.

Employers gave advice and provided collaboration ideas in the following areas:

- 1. Course specific content.
- 2. Emphasis on practical training.
- 3. The incorporation of attachments and experience gathering as an integral element of course success.
- 4. The need for increased communication.

When asked to give advice to heads of TVET institutions, 76% of employers stressed a need to focus on quality and content of the courses on offer. Suggestions were focused on the increase of both the relevance of the subject matter/course content and the practical element of the training. Suggestions included:

- Placing emphasis on continuous learning and development to encourage graduates to continue growing and in turn keep their information relevant and up to date.
- Include a balance of theory and practice in all curricula, as dictated by course needs.



- Exposure to occupational areas' relevant tools and equipment to make students more equipped for employment and job ready.
- To provide courses that build on the middle level technical skills, as opposed to just entry level and assuming all other trainings would be led by employers.
- To improve content around behavioural-, codes of conduct- and ethics- (work and business) training.
- To improve the quality of the tools and equipment used for training purposes.
- To focus on improving English and IT skills across all courses with hands on experience in computer usage.
- Foster a space where there is less focus on theoretical exams and more focus on practical assessments.
- To introduce more courses on in demand occupational areas that combine both technical skills as well as soft skills.
- Focus on hiring the most qualified tutors.
- Introducing shortlisting processes for the selection of students attending the courses.
- To create a space where non-formal or work-based training can have avenues of certification to ensure that technically skilled job seekers can have their skills validated. This was especially highlighted by SMEs working and training many young people in the rural areas. It was perceived that recognition of skills built informally and non-formally would mean TVET institutions are more context relevant and emphasis is placed on supporting all groups not only those participating in the formal space.

In addition to course content, 43% of employers interviewed discussed and stressed the importance of industry links. Suggestions included but were not limited to the incorporation of:

- A student industrial work experience scheme.
- Industrial attachments and on-the-job training.
- Internships.
- Exposure of students to field operations.
- Industrial site visits as a form of motivation.
- In-plant training throughout studies.
- Multiple attachments with a variety of employers within an occupational area.

Whilst employers differed in their approach to how these would be managed, they agreed that they should have clear skills accumulation objectives that would ensure job preparedness. Some even suggested that TVET institutions, once incorporating a holistic curriculum for their students, would act as the best recommenders for candidates. They can help market excellent students to companies to help them fill future vacancies and in turn improve their credibility and sustainability in the long run.

General communication and engagement was also highlighted by **27% of employers** questioned. They focused on the creation of a space where lines of communication could be developed and where the private sector is kept abreast of relevant developments within the TVET sector both from an education/training as well as a policy development perspective. Suggestions included:

- Experienced staff providing their time and skills and act as part time instructors in certain institutions.
- Regular consultation with company experts to ensure knowledge and field developments are passed on to students and communicated via course content.
- Linking students through coaching/mentorship opportunities with experienced professionals to encourage continuous learning and development.
- Creating a space or platform for continuous knowledge sharing from both sides.
- Create relationships with the private sector to open circles of influence that would provide students with valuable networking opportunities.



When asked about their existing collaboration with TVET institutions, most respondents indicated that there were no direct links nor collaboration with institutions.

- 49% of employers interviewed had accepted interns and conducted on-the-job training but they were not done through necessarily formal channels with specific institutions.
- 27% stated no previous cooperation or collaboration.
- 27% explained that they do recruit TVET certificate holders but that in itself was not an indication that they were hired through direct links with certain institutions.
- 8% had their experienced staff serve as instructors in TVET institutions.
- Only 3% had invited TVET institution instructors for training in their establishment or had a relationship of regular exchange between TVET institutions.

Despite the current patterns of collaboration and cooperation, employers suggested the following ideas to increase avenues of collaboration:

- 1. Incorporation of more relevant courses that would not only attract young people pre-employment but private companies and their staff.
- 2. Establishing relationships that would allow for Trade Certification tests to be conducted so trained workers can be certified, even with the absence of formal training.
- 3. TVET institutions incorporating more shadowing and internship elements to their curriculum where the private sector can be engaged.
- 4. Direct partnerships with the private sector that would allow for company tailored training programmes to be designed.
- 5. Free training for company staff, by TVET institutions, in exchange for on the job training or incorporation of interns.
- 6. Direct recruitment support where high performers can be recommended to companies. Such a provision of good quality graduates would increase institutional credibility and pave the ground for relationship building.
- 7. Knowledge sharing, regular communication and information exchange.
- 8. Small businesses and TVET institutions should collaborate where they can and offer practical training for students in exchange of business training tailored to SME/private company needs.



Conclusions and Recommendations

Having analysed the data with specific consideration of core industries in Sierra Leone, this report offers an insight that directly complements and delves into the unexplored areas of previous studies. Some of the key conclusions that must be highlighted as part of the Skills Needs Assessment are:

- 1. The prevalence of employment opportunities for TVET qualified personnel across the examined five core industries.
- 2. There are gender disparities in terms of female participation in three of the five examined industries. Gender participation gaps are evident not only in staff profiles but also in the presence of qualifications and certificates. Gender gaps particularly noted in:
 - a. Energy.
 - b. Construction/Mining/Manufacturing.
 - c. Agriculture/Fisheries.
- 3. Companies are addressing skills and hiring gaps by extensively investing time, money and effort in professional and technical trainings to increase the efficiency and suitability of their teams.
- 4. Lack of and/or limited job training, skills and/or experience is a direct cause behind both poor performance on the job as well as limited access to job opportunities in the labour market. This presents itself as unemployment amongst Sierra Leone's graduates and as hiring challenges and difficulties for employers.
- 5. Gaps and weaknesses in staff have created a reactive private sector that has had to integrate training, mainly on the job, as part of their activities.
- 6. There is a clear gap between supply and demand.
- 7. The statement of the 'Skills Gap Analysis' which implies a lack of enthusiasm behind private sector companies taking on interns fails to understand the limitations behind how current internship opportunities are conducted.⁴ This current research highlights the opposite; a desire and a willingness from the private sector to incorporate and take on interns, etc., as part of a holistic approach and a wider intervention that would be multifaceted to build skill sets, both soft and hard, and in turn build capacity and fill need gaps.
- 8. Soft skills are imperative for work place success with clear patterns of need across the five core industries examined with communication skills coming out as paramount.
- 9. A basic level of English language and IT skills, in an increasingly technological world, is necessary to ensuring graduates are relevant to current labour market needs.
- 10. Employers are becoming more and more disenchanted with certificates and grades and put more of a focus on practical skills and experience when hiring. Statistics around which TVET qualifications staff had were difficult to gain because a lot of employers did not capture that data as part of their staff files.
- 11. Interviews, assessments and knowledge tests are integral parts of recruitment processes across sectors.
- 12. Employers are calling for a re-examination of how TVET institutions are functioning with a willingness and a desire to collaborate and participate in dialogue and communication to encourage more relevant content and teaching styles. This should be complemented with access to industrial exposure to provide better quality graduates and experiences, which would be beneficial to all parties.

⁴ Mannah, E and Gibril YN. Skills Gap Analysis for Private Sector Development in Sierra Leone. 2012. Pg. 47.



Recommendations:

- 1. Activities should be undertaken to encourage the participation of more women in the highlighted male dominated industries. This would in turn reduce gender disparities and increase female access to opportunities. This should come from an education and training angle initially.
- 2. The occupational areas highlighted both present and needed should all be considered when assessing relevance and content of current courses and curriculum. Direct investment and capacity building interventions should take place within the occupational areas difficult to find staff for as indicated in Table 4.
- 3. Professional and technical skills highlighted during the industry specific skills analysis should be directly integrated into courses and curricula to ensure a more relevant and ready labour force. This should be part of a wider private sector collaboration plan that would encourage employers to participate in highlighting skills needs as and when they arise.
- 4. A focus within TVET institutions should not only be on technical "hard" skills but also on the very much needed "soft" skills. Training in the six areas highlighted within the research should be incorporated across all curricula.
- 5. TVET institutions should capitalise on the existing space created by companies, which encourages and allows for on-the-job training. Partnerships can be developed which encourage institutions' trainers or students to broaden their skill sets through attachments and other opportunities.
- 6. Job seeking skills and preparedness should be integrated into content at TVET institution level. This would not only increase employment success rates but also set realistic expectations with students who can be demotivated when completing studies and still facing challenges in finding work. Interviews and tests, knowledge of and practice, should also be integrated to ensure basic knowledge and understanding of recruitment processes.
- 7. Collaboration and advice points highlighted by employers in the "TVET Institutions and Private Sector Relationships" section, should be used as the basis of development of the communications platform highlighted within the 'Diagnostic Study' as Activity 4 within Technical Assistance 'Support to TVET in Sierra Leone'.
- 8. Building on and encouraging similar initiatives to GIZ's "PPP (Public Private Partnerships) Fund for Mano River Union Countries" to allow for support to government in re-establishing infrastructure through the provision of technical expertise and access to technology. In the absence of funds to equip the influx of TVET institutions, these partnerships would create the needed space for information exchange and learning at no cost to the institutions and with benefit to the private sector.
- 9. The TVET Coalition of Sierra Leone should play the role of an intermediary of facilitating communication until an alternative body is set up to bridge the communication gap highlighted in the research and very clearly referred to in the 'Skills Gap Analysis' report (2012). The Coalition should participate in and lead activities that encourage the following:
 - a. Dissemination of SNA findings.
 - b. Increasing private sector activities to engage and create network opportunities for training institutions.
 - c. Highlighting and conducting an active branding campaign to expose public private partnerships that are successful.
 - d. Provide experts within the space to engage and build the capacity and relevance of training institutions.
 - e. Position itself as a hub of relevant and up to date information around TVET developments in Sierra Leone with an approach that captures private sector interest, ensures training institution participation and integrates dialogue with students, prospective students and graduates.



"Education institutions and the private sector must work closely to close the skills gap and better manage expectations and performance $[\ldots]$ A forum must be set up to facilitate dialogue and collaboration between training institutions and the private sector."⁵

- 10. It is necessary to strengthen existing internship programmes, as well as the UNDP Careers Advisory and Placement Service to ensure relevance and monitoring of experiences gained. Discussions around potentially setting up a separate TVET internship programme, should also be considered. Essentially, a more organised internship programme would be of greater benefit to both the industry partners and students. Quality graduates can be ambassadors for the expansion of such programmes, making it easier in turn to build on private public partnerships in other areas. In addition, providing such a programme with the tools to recommend suitably qualified candidates would create necessary engagement and more appreciation of their roles and contributions within the space.
- 11. An integration of non-formal TVET training into discussions and working with institutions to create a space for information exchange as well as experience-based certifications is necessary. These were highlighted in the research as not only beneficial to the individuals accumulating skills outside formal spaces but also to the companies in which they work.
- 12. Teachers should have support and training to be able to deliver all suggested areas as per report recommendations. TVET trainers are usually selected for technical expertise so therefore a focus needs to be placed on hiring and training trainers that can increase the employability preparedness aspect of the curriculum. GIZ in collaboration with the Government of Sierra Leone strives to establish an in-service teacher training for TVET teachers and trainers.
- 13. Continuing to build a positive brand image around TVET and the opportunities available within it would ensure attraction of high potential candidates, as well as brand it as a more relevant field of investment, growth and an avenue for public private sector activity initiation.
- 14. An integration of entrepreneurship skills training into TVET curricula is recommended to help graduates that cannot be absorbed by the job market further increase their post-graduation opportunities. This would put them in a position to establish themselves and ensure a clear career path.
- 15. This is a pivotal period for the implementation of the report's recommendations which elaborate on the key areas of activity highlighted within the new government's manifesto⁶ which stresses public private partnerships to improve the education sector, better equipped institutions, the initiation of a skills for jobs competitiveness programme, as well as repeated research, such as this SNA, to ensure a relevance in curriculum that responds to the economic demands of the country as a whole.

⁵ Mannah, E and Gibril YN. Skills Gap Analysis for Private Sector Development in Sierra Leone. 2012. Pg. 48.

⁶ Sierra Leone People's Party Manifesto. "New Direction". 2018.



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Skills Needs Assessment

A survey about gaps between skills required by employers (demand) and skills provided by the current TVET system (supply)

The survey is conducted by the TVET Coalition Workgroup Sierra Leone



Background

Work is a major feature in most people's lives. Not only does it provide them with a means of survival in terms of food, clothing and shelter, but also the type of work undertaken by individuals and groups has a major impact upon their self-identity, social status and standard of living. Technical and Vocational Education and Training (TVET) is concerned with the acquisition of knowledge and skills for work as technicians, or in support roles in professions such as engineering, accountancy, medicine etc.

The TVET Coalition is an alliance composed of government institutions, training providers, international donors and (I)NGOs. Its overarching objective is to improve the quality and employability of TVET graduates in Sierra Leone by aligning the demand and the supply of skills and competencies.

Skills development is formulated as one of the key priorities of the Government of Sierra Leone in its 'Agenda for Prosperity'. Recent research studies (Skills Gap Analysis 2012, Market and Economic Survey and Mapping of Training Providers and Supportive Structures in Sierra Leone 2013, Labour Force Survey 2014 etc.) do not reveal the gaps between skills and competencies required by employers (demand) and skills and competencies provided by the current TVET system (supply). Therefore, the TVET Coalition formed a workgroup to identify possible gaps between the current skill levels of employees and the needs of employers in Sierra Leone. This will be done through a survey, which is designed to be completed by the HR department. This survey is the first step towards identifying the above-stated gaps. The next phase will require input from supervisors of technical staff. With this survey, the TVET Coalition hopes to contribute highly to the benefit of the industry, Sierra Leonean youth and the economy of Sierra Leone as a whole.

Confidentiality Statement

The information you will provide in this TVET Skills-Gap Analysis questionnaire is confidential and will be used for research purposes only. The information will not be linked to individual responses but to general categories only. The information will only be accessed for statistical analyses and the compiling of reports. Only the researcher can identify the responses of individual subjects. No personal information will be released to any third party without your expressed consent. All research groups have signed a nondisclosure agreement (NDA).

Institution/organisation/company:	
Town:	District:
Contact Person:	Designation:
Email:	Phone No:



1. How many employees are employed by your company/organisation?

		Number of employees	
	Femal e	Male	
Management Staff			
Administrative Staff			
Technical Staff			
Drivers			
Other, please specify:	_		
Total			

2. What is the **highest** level of technical/vocational education that your current individual **Technical Staff** level (see question 1) have achieved?

	Number of employees	
	Femal e	Male
No Certificate (e.g. Apprenticeship, WASSCE, etc.)		
National Vocational Qualification (NVQ)		
National Vocational Certificate (NVC)		
Advanced National Vocational Certificate (ANVC)		
National Technical Certificate (NTC)		
(Ordinary) National Diploma (ND)		
Higher National Diploma (HND)		
Higher Than All of the Above		
Other (e.g. Non-NCTVA Accredited, International Certificates, etc.)		
Total		



3. What are the three **most important** trades/occupational areas in which you require TVET skilled/qualified personnel (e.g. Plumber, Bookkeeper, Electrician, Receptionist, etc.)?

	Most Important Trade/Occupational Area	Are qualified Sierra Leoneans available for this trade/occupational area?
1		🗆 Yes 🗆 No
2		🗆 Yes 🗆 No
3		🗆 Yes 🗆 No

4. Please fill in the box below with the six trades/occupational areas that are the **most difficult** to find/recruit skilled/qualified Sierra Leoneans, and check off your solution for hiring in that area (1 being the most difficult and 6 being the least difficult).

Trade/Occupational Area	Hiring Solution for Trade/Occupational Area
	□ Hire internationally
	□ Train Staff
	□ Other:
	□ Hire internationally
	□ Train Staff
	□ Other:
	□ Hire internationally
	□ Train Staff
	□ Other:
	□ Hire internationally
	□ Train Staff
	□ Other:
	□ Hire internationally
	□ Train Staff
	□ Other:
	□ Hire internationally
	□ Train Staff
	Other:



5. Please rank what you look for in applicants from 1 to 6 (1 being most important and 6 being least important)

R ank	Criteria	R ank	Criteria
	Graduation Certificates		Grades (Pass, Credit, Distinction, etc.)
	Practical Skills		Work Experience
	Attitude		Other, please specify:

6. How do you assess applicants (Test, Interview, etc.)?



Annex 2- Phase 2 Questionnaire

TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET) COALITION OF SIERRA LEONE EMPLOYERS SURVEY

This questionnaire should be completed by supervisors of departments/units with workers in Technician/Trade Workers Category

Background

Technical and Vocational Education and Training (TVET) is concerned with the acquisition of knowledge and skills for work as technicians or in support roles in professions such as engineering, accountancy, medicine etc... The TVET Coalition of Sierra Leone is an alliance composed of government institutions, training providers, international donors, private companies and (I)NGOs. Its overarching objective is to improve the quality and employability of TVET graduates in Sierra Leone by aligning the demand and supply of skills and competencies. The TVET Coalition formed a workgroup to identify possible gaps between the current skill levels and employees and the needs of employers in Sierra Leone. This is what is being done through this survey.

I humbly request you to complete this questionnaire

Confidentiality Statement

The information you will provide in this TVET Skills-Gap Analysis questionnaire is confidential and will be used for research purposes only. The information will not be linked to individual responses but to general categories only. The information will only be accessed for statistical analyses and the compiling of reports. No information will be released to any third party without expressed consent.

SECTION I: ESTABLISHMENT IDENTIFICATION

EI: Company's N	Vame			
E2: Location	I= Freetown	E3:	2= Outside Freetown	
E3: What is the I=Governme 4=Foreign Pi	ent	2=Semi-G	e in terms of ownership? overnment 3=Local ocal and Foreign Private	Private
E4: Which secto	r does your company e (including Fisheries)	•	2= Tourism and Hospitality	3=Health



SECTION 2: ABILITIES AND SKILLS OF EXISTING STAFF

SK.I	Which specific occupational category of workers do you supervise in your establishment? (e.g. electricians, masons, plumbers, waiters/waitresses etc)	
SK.2	Are there any tasks which your current workers are not able to perform?	I=Yes 2=No. If No, Skip SK.3
SK.3	Could you mention specifically which tasks your workers cannot perform?	
SK.4	What do you think are the leading causes for your staff inability to carry out these tasks? You can choose more than one option	 I=Limited skills 2= Lack or limited job training 3= Wrong recruitment 4= Frequent changes in jobs 5= Limited capacity to learn 6= Lack of experience 7= Newly hired/recently recruited 8= Lack of motivation 9= Others, specify
SK.5	Could you mention specifically which professional/technical skills your workers need to effectively perform their tasks? (e.g. sizing electrical wires and mixing mortar)	



SK.6	Could you mention specifically which soft skills your workers need to effectively perform their tasks? (e.g. communicating in English and team building)	
SK.7	What can you advise to heads of TVET institutions in order to improve the quality and standards of TVET graduates?	·

SECTION 3: TRAINING

TR.I	In the past 2 years, have you offered any training programme to your employees?	I = Yes 2= No. If No, Go to TR.4
TR.2	What kind of training did you offer?	I=Professional/Technical training 2=Basic communication 3=Team Building 4=Leadership and Management 5=IT training 6=Business Management/Entrepreneurial Training 7=Others, specify
TR.3	How do you train your employees?	I=Nowhere 2= On-the-Job Training/Internship 3= Apprenticeship 4=Training from supplier of technology 5=In-country training by private training ovports/institutions
	You can choose more than one option	experts/institutions 6=Training from a public training institution 7=Overseas training 8= Others, specify



TR.4	What barriers do you think exist that hinder the continuous training of your staff in order to have a team of skillful employees in the future? You can choose more than one option	 I=Lack of training funds 2=Lack of courses 3=Lack of suitable instructors 4=Lack of staff motivation regarding training 5=Frequent mobility of labour force 6=Lack of time for training 7= No barriers 8= Others, specify
TR.5	Do you have a separate item in the budget for training?	I= Yes 2= No 3= I do not know
TR.6	How does your establishment collaborate with the TVET institutes? You can choose more than one option	I=No cooperation 2=We take trainees for On-the-Job Training/Internship 3=Experienced staff serve as instructors in vocational centres 4=Instructors of vocational centres are invited for training in the establishment 5=We recruit graduates from TVET institutes 6=We participate in curriculum development 7=Regular exchange about training needs and occupations required with TVET institutes 8=Others, specify
TR.7	How do you think collaboration between private companies and TVET institutions can be improved?	



SECTION 4: RECRUITMENT FOR NEW VACANCIES

VA.I	How does your establishment usually fill vacancy? Please choose at most 2 methods	I=Announcements in newspaper, website or job portals 2= In house recruitment 3=From education/training institutions 4= Acquaintances, relatives and friends 5=Promoting other existing workers in the enterprise 6=Others, specify
VA.2	Did your establishment have any difficulty in filling vacancies in your department?	I = Yes 2= No. If No, Skip VA.3
VA.3	Why is it difficult to fill vacancies? You can choose more than 1 option	 I=Applicants lack relevant work experience 2=Applicants lack education qualification 3=Applicants lack technical or occupational skills 4=Low number of applicants 5=Applicants unwilling to accept offered wages 6=Applicants unwilling to accept offered working conditions 7=Lack of career development path 8= Applicants lack required work experience 9= Others, please specify
VA.4	If vacancies were not filled, what did your establishment do to cope?	 I=Trained existing staff 2=Increased the salary and benefits to make the job more attractive 3=Outsourced to other companies 4=Invested in technology 5=Enhanced recruitment procedures/ways 6=Paid overtime for existing workers 7=Hired less qualified applicant 8= Used temporal labour 9=Improved on incentive to retain workers 10=Others, specify



GUIDELINES FOR KEY INFORMANTS INTERVIEWS

SUPERVISORS

- I. How many people do you supervise in this department?
- 2. What is the minimum qualification requirement for working in this department?
- 3. How qualified are the current workers?
- 4. What can you say about the skills and competencies of your staff?
- 5. Do you think their skills match with their qualifications?
- 6. What do you do to improve the skills of your workers?
- 7. What do you think is responsible for the mismatch?
- 8. Which specific skills do you think the workers in this department lack?
- 9. Are there opportunities for training? Do you have a budget for training?
- 10. Which challenges do you face in filling vacancies in your department?

.....

GUIDELINES FOR FOCUS GROUP DISCUSSIONS

(WITH WORKERS)

- I. How long have you been working here?
- 2. How were you recruited?
- 3. Where were you trained before recruitment? What is your level of qualification?
- 4. Do you feel confident to carry out your job?
- 5. Are there skills you need but you lack? Which specific skills?
- 6. Do you benefit from training programmes of the establishment?