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IMPROVING THE QUALITY AND ATTRACTIVENESS OF VOCATIONAL EDUCATION AND TRAINING IN LEBANON FOR VULNERABLE SOCIAL GROUPS (QUA-VET)

Desk Research & Benchmarking of WBL Models in Lebanon, Neighbouring Countries, and Global Best Practices

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0 Abbreviations

Abbreviation	Full Term
AFD	Agence Française de Développement (French Development Agency)
ALI	Association of Lebanese Industrialists
AVSI	Association of Volunteers in International Service
BT	Baccalauréat Technique (Technical Baccalaureate)
CBA	Competency-Based Assessment
CBT	Competency-Based Training
CCIAZ	Chamber of Commerce, Industry, and Agriculture in Zahle
DACUM	Developing A Curriculum
DGVTE	Directorate General for Technical and Vocational Education
EMIS	Education Management Information System
EQF	European Qualifications Framework
EU	European Union
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Cooperation)
ICT	Information and Communication Technology
IECD	Institut Européen de Coopération et de Développement (European Institute for Cooperation and Development)
ILO	International Labour Organization
In-CT	In-Company Training
LMS	Learning Management System
LMI	Labor Market Intelligence
M&E	Monitoring and Evaluation
MEHE	Ministry of Education and Higher Education
MoL	Ministry of Labour
MoU	Memorandum of Understanding
NEET	Not in Education, Employment, or Training
NGO	Non-Governmental Organization
NQF	National Qualification Framework
NSF	National Strategic Framework for TVET
OECD	Organisation for Economic Co-operation and Development
PPP	Public-Private Partnership
ProVTE	Promotion of Vocational and Technical Education in Lebanon

Abbreviation	Full Term
QuA-VET	Improving The Quality & Attractiveness of Technical and Vocational Education and Training (TVET) in Lebanon for vulnerable social groups
ROI	Return On Investment
RPL	Recognition of Prior Learning
SAB	School Advisory Board
SDG	Sustainable Development Goals
SME	Small and Medium Enterprises
ToT	Training of Trainers
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEVOC	UNESCO International Centre for Technical and Vocational Education and Training
UNICEF	United Nations Children's Fund
USD	United States Dollar
VTE4ALL	Vocational and Technical Education for All (GIZ project)
WBL	Work-Based Learning

1 Introduction

1.1 Purpose of the Report

This desk research report aims to provide a comparative analysis of Work-Based Learning (WBL) systems across selected countries, **Belgium, Germany, Denmark, Iraq, Jordan, Egypt, and Lebanon**. It serves as a foundational step in the framework of the project “Improving The Quality & Attractiveness of Technical and Vocational Education and Training (TVET) in Lebanon for vulnerable social groups” (QuA-VET), co-financed project by the European Union (EU) and Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung - German Federal Ministry for Economic Cooperation and Development (BMZ) that is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) in partnership with the Directorate General for Technical and Vocational Education in Lebanon (DGVTE), which focuses on enhancing the quality of Work-Based Learning (WBL) and In-Company Training (In-CT) in Lebanon. The objective is to extract WBL practical insights and best practices from diverse TVET ecosystems and recommend scalable models tailored to the Lebanese context.

Aligned with In-CT and WBL component of the QuA-VET project, this report contributes directly to the goal of improving the quality and adoption of WBL and In-CT for vulnerable youth and employees in Lebanon. The benchmarking exercise supports the development of regulatory instruments, standards, and quality assurance frameworks that are responsive to labor market demands and grounded in proven international experience. By informing future interventions, the report reinforces the holistic vision of QuA-VET: increasing the employability of TVET learners through stronger public-private partnerships and practice-oriented learning pathways.

1.2 Scope and Methodology

Scope of the Report

This report benchmarks Work-Based Learning (WBL) and TVET systems across:

- **Seven countries:** Belgium, Germany, Denmark, Iraq, Jordan, Egypt, and Lebanon
- **Focus areas:** Legal frameworks, institutional capacity, public-private cooperation, and quality assurance
- **Objective:** Identify best practices and provide recommendations to improve WBL implementation in Lebanon. The findings are intended to inform the development of concrete standards, instruments, and policies that align with QuA-VET's goals namely, improving the quality and attractiveness of TVET, strengthening public-private partnerships, and reinforcing the governance and sustainability of WBL systems across the country.

Methodology

- **Desk Review**

- Analysis of national laws, policies, and international reports (International Labour Organization (ILO), UNESCO, World Bank)
- Review of quantitative indicators (e.g. enrolment, unemployment rates) and qualitative indicators (e.g. TVET infrastructure, funding)
- **Comparative Benchmarking**
 - Evaluated governance structures and dual systems in selected countries
 - Mapped Lebanon's position against regional and international models
- **Stakeholder Consultations**
 - Interviews and surveys with **17 TVET institutions** across six Lebanese regions
 - Discussions with the private sector, chambers, and development partners, national and international organizations (UNICEF, IECD, ILO)
- **Synthesis & Recommendations**
 - Consolidated findings are used to propose practical and scalable instruments, such as policy guidelines, implementation tools, and coordination mechanisms, alongside a roadmap that outlines key steps for enhancing the legal, institutional, and operational dimensions of WBL in Lebanon

1.3 Rationale Behind Country Selection

The selection of **Belgium, Germany, and Denmark** reflects mature and well-institutionalized dual systems, offering insights into effective integration of WBL within formal education, strong employer engagement, and national certification mechanisms.

Jordan and Egypt represent regional best practices in reforming TVET and WBL governance in socio-economically comparable settings.

Iraq presents an emerging model with parallels to the Lebanese context, particularly in terms of post-conflict reconstruction and youth employability challenges.

Finally, **Lebanon** is included as the target context, providing the basis for comparison and localized recommendations.

2 Executive Summary

2.1 TVET Benchmarking Analysis

This report provides a comparative analysis of TVET systems and key educational, economic, and labor market indicators across Belgium, Germany, Denmark, Iraq, Jordan, Egypt, and Lebanon. The findings highlight Lebanon's position relative to leading and developing TVET systems, identifying strengths, weaknesses, and recommendations for improvement.

2.1.1 Key Findings¹

1. TVET Enrolment and Female Participation

- Lebanon's TVET enrolment stands at 14.5%. For comparison, Belgium reports 40% while Iraq and Jordan have lower rates of 3.5% and 3% respectively.
- Female participation² in TVET reaches 41%, a level similar to Denmark 42.3% and Egypt 41%.

2. Education and Training Participation

- Lebanon's youth (age 15-24) participation in education³ 49.9%, whereas Belgium reports 74% and Denmark 73.7%.
- The overall participation rate in education and training in Lebanon is (13.4%), indicating considerable scope to expand lifelong learning opportunities.

3. Institutional Capacity and Government Investment⁴

- Lebanon has 566 TVET institutions⁵. For reference, Jordan has 262, while Denmark reports 5,022 institutions.
- Government expenditure on education about USD 1.1 billion. By comparison, Germany invests (USD 233 billion), and Belgium (USD 38 billion). These figures illustrate absolute investment levels across different countries.

4. Economic and Labor Market Performance

- Lebanon's Gross Domestic Product (GDP) totals (USD 21 billion), the lowest among the benchmarked countries, with negative growth of -0.6%.
- Unemployment stands at 11.6% with youth unemployment at 23.7% pointing to the importance of stronger TVET-labor market linkages.

5. Literacy and Workforce Skills

- Youth literacy in Lebanon is high at 97%, close to Jordan's (99%).
- However, data on workforce numeracy skills are not available, indicating potential gaps in technical competencies.

2.1.2 Recommendations for Lebanon's TVET System

¹The data related to the figures in the key Findings is extracted from the profiles compiled by UNESCO-UNEVOC in 2021 for Belgium, Germany, Denmark, Iraq, Jordan, Egypt and Lebanon except for the data related to the Institutional Capacity, which are compiled by UNESCO-UNEVOC in 2019 for all countries. They are provided for contextual comparison only and are not adjusted for population size or per capita measures.

² While female participation in TVET in Lebanon (41%) is relatively strong and comparable to leading countries like Denmark (42.3%) and Egypt (41%), there remains a sectoral gender segmentation. Women are predominantly enroled in health & paramedical, administrative & office work, education, and beauty-related programs, while participation in technical and industrial fields remains limited. This gendered distribution mirrors global patterns but is more pronounced in Lebanon, reflecting both cultural expectations and labor market structures.

³ The 49.9% figure for Lebanon includes both formal and non-formal education and training, but the majority still comes from formal education; non-formal participation remains limited compared to Belgium and Denmark, where lifelong learning is far more institutionalized.

⁴ The updated data related to the Institutional capacity in Lebanon as per the support of the DGTVE (2025) is 555, including 157 public and 398 private institutions.

⁵ Lebanon's total number of formal TVET institutions officially supervised by MEHE (DGTVE 2019) is 566, including 168 public and 398 private institutions.

To enhance the effectiveness and impact of Lebanon's TVET system, the following strategic actions are recommended:

1. Boost TVET Enrolment and Attractiveness

- Introducing incentives such as scholarships, career orientation programs, and awareness campaigns to promote vocational education.
- Strengthening WBL schemes linked to industry demand.

2. Deepen Public-Private Collaboration

- Fostering partnerships with private sector companies to align curricula with labor market needs.
- Expanding opportunities for work-based learning and joint training initiatives.

3. Increase and Target Government Investment

- Allocating greater funding to modernize TVET infrastructure, support digital transformation, and enhancing training quality.
- Prioritizing underfunded regions and sectors with growth potential.

4. Tackle Unemployment through Skills-Based Programs

- Designing labor market-responsive training and upskilling programs, especially for youth and vulnerable groups.
- Promoting entrepreneurship and self-employment through practical, skill-based support initiatives.

5. Modernize Curriculum and Expand Digital Learning

- Updating training programs to include emerging technologies and transversal competencies.
- Scaling up e-learning platforms and blended learning models to reach wider audiences.

6. Strengthening Quality through Competency-Based Assessment (CBA)¹

- Institutionalizing CBA across practical components of TVET programs to ensure students are evaluated on real skills aligned with occupational standards.
- Training instructors and workplace supervisors in CBA methodologies to ensure consistency and fairness in skill evaluation.
- Linking assessment tools to labor market-relevant learning outcomes and national qualifications frameworks.

7. Expand Competency-Based Training (CBT) in Non-Formal TVET²

¹ According to UNESCO-UNEVOC "Glossary of Terms for TVET Assessment and Verification" (2013), Competency-Based Assessment (CBA): the gathering and judging of evidence in order to decide whether a person has achieved a standard (level) of competence.

² According to UNESCO-UNEVOC "Glossary of Terms for TVET Assessment and Verification" (2013), Competency Based Training (CBT): A structured training and assessment system that allows individuals to acquire skills and knowledge in order to perform work activities to a specified standard.

CBTs are structured into two main parts: practical work within the TVET institution and work-based learning or hands-on experience within a company, aligned with the specific field of the CBT.

- Introducing modular, outcome-based training programs for youth and adults outside the formal education system.
- Aligning CBT with occupational standards and labor market demand to ensure relevance.
- Developing certification pathways through Recognition of Prior Learning (RPL) and linking with the National Qualifications Framework (NQF).
- Partnering with Non-Governmental Organizations (NGOs), employers, and training centers to deliver CBT in community-based and workplace settings.

By implementing these strategic actions, Lebanon can improve its formal and non-formal TVET system's responsiveness, enhance youth and vulnerable social groups employability, and contribute to inclusive economic growth.

3 Work-Based Learning (WBL) in Lebanon: Comprehensive Analysis

3.1 Overview of Lebanon's WBL System – Current Landscape and Challenges

3.1.1 Legal and Institutional Framework

Lebanon's WBL system is anchored in [Decree No. 11019 \(1968\)](#)¹ and [Decree No. 1384 \(1999\)](#)², which define the structure for apprenticeships and the Dual System. While these legal instruments lay the foundation, they are outdated and lack enforcement mechanisms. Apprentices are not formally recognized as workers and do not receive social protection, health insurance, or wage guarantees (Ministry of Education and Higher Education (MEHE), 2018)³.

3.1.2 Key Strengths and Opportunities

Despite structural limitations, there is increasing institutional and public recognition of the WBL model. Several pilot programs, often supported by international donors such as GIZ, the EU, and UNICEF, have successfully demonstrated the value of work-based education in addressing Lebanon's youth unemployment and skills mismatch. This engaged donor landscape continues to play a vital role in supporting vocational reform efforts.

- **National Pool of Certified CBA Assessors:**

More than one hundred ⁴TVET teachers and private sector professionals have already been trained and certified in **CBA** through GIZ-supported initiatives. This provides a skilled human resource base to ensure consistent and credible assessment of practical competencies within WBL programs.

¹ Decree attached as Annex 1.

² Decree attached as Annex 2.

³ MEHE. (2018). *National Strategic Framework for Technical and Vocational Education and Training 2018–2022*. Beirut: Ministry of Education and Higher Education.

⁴ Under the QuA-VET project alone, 95 TVET teachers and private sector professionals were trained and certified in CBA between 2021 and 2024. Additional assessors were trained through earlier GIZ initiatives, including the ProVTE and VTE4ALL projects.

- **Established Capacity in Competency-Based and Modularized Training (CBT):**

GIZ projects (Promotion of Vocational and Technical Education in Lebanon (ProVTE), VTE4ALL, QuA-VET) have **developed and implemented CBT modules** across multiple sectors, training hundreds of non-formal TVET learners. These resources can now be expanded or institutionalized into national training programs.

- **Sustainability Mechanisms Through ToT for CBT Delivery:**

QuA-VET provided **Training of Trainers (ToT)** for TVET instructors, empowering them to independently deliver CBT modules and conduct competency-based assessments, ensuring scalability without ongoing external support.

- **Third-Party Certification of Learners:**

Trainees assessed through the CBA approach have received **certificates from international private sector third-party companies**, increasing the credibility and employability of graduates. This introduces a model of **industry-recognized certification** that can be replicated across sectors.

- **CBT Module Development by Local Experts:**

TVET staff and private sector actors have been trained to **co-develop CBT modules** in key domains such as health inspection, food safety, industrial mechanics, and agro-food. This contributes to national ownership and the **localization of training content** based on market demand.

- **Active and Institutionalized School Advisory Boards (SABs):**

The SABs, established with GIZ support, have become functional platforms for dialogue and cooperation between TVET institutions and the private sector. They have already issued **policy-relevant recommendations** to DGVTE, including calls to integrate CBA into curricula and recognize CBT-certified non-formal learners, showing readiness for **bottom-up reform**.

- **Strong Foundation for National Policy Dialogue:**

The presence of trained assessors, CBT content, ToT mechanisms, and structured private sector engagement (via SABs) creates favorable conditions for launching a **national WBL strategy** with CBA/CBT at its core.

- **High Relevance to Lebanon's Labor Market Priorities:**

The sectors targeted for CBT (agro-food, industrial mechanics, health inspection, etc.) are **economically significant and under-supported** by traditional education. Expanding WBL through CBT addresses both **skills shortages and youth employability**.

This momentum provides an opportunity to develop a more robust and scalable national framework aligned with the objectives of the In-CT and WBL component of the QuA-VET project.

Opportunities include:

- **Openness from selected industry sectors** such as Industrial mechanics, Health inspection and Food safety, agrifood, health, and green energy is supported by recent consultations and surveys conducted under QuA-VET and related TVET projects. These sectors have actively participated in past WBL pilot initiatives and expressed strong interest in collaboration during stakeholder workshops and Chamber of Commerce, Industry, and Agriculture in Zahle (CCIAZ) outreach in the Bekaa.
- **Institutionalization of Regulatory Instruments:**
The presence of SABs, certified assessors, and limited but existing public-private collaboration offers a strong platform to **pilot and validate regulatory instruments** such as Memoranda of Understanding (MoUs), WBL coordination protocols, and quality assurance guidelines in both companies and TVET institutes.
- **Operationalization of In-CT and Work-Based Learning (WBL):**
Through the trained ToT pool of TVET teachers and private sector actors, Lebanon can **operationalize In-CT and WBL programs** by clearly defining roles and responsibilities, using the newly developed instruments in real-life settings.
- **Capacity Building for WBL Focal Points:**
There is an immediate opportunity to **deploy and train WBL coordinators and in-company trainers** using the already engaged network of teachers, SAB members, and company representatives, who are familiar with CBT/CBA approaches.
- **Scaling Through Endorsement and National Adoption:**
The recommendations issued by SABs to DGVTE, combined with growing awareness at the national level, create momentum for **policy endorsement of at least three regulatory instruments**. These could be championed through MoUs, white papers, or formal decisions by the DGVTE.
- **Establishment of a Collaborative Public-Private Governance Body:**
The SABs can serve as a foundational structure or model for establishing a **national joint public-private board**, ensuring long-term oversight, shared accountability, and continued refinement of WBL instruments.
- **Use of International Benchmarks with Local Adaptation:**
The piloted tools and training approaches align with ILO and GIZ international best practices, enabling Lebanon to **leverage global expertise** while adapting them to the local regulatory and labor market context.

3.1.3 Weaknesses and Barriers to Scale

Key challenges hindering WBL scale-up include:

- **Legal Gaps:** The legal basis for WBL (Decrees 11019 and 1384) lacks modern enforcement mechanisms. Moreover, there is no clear designation of apprenticeship contracts or worker rights, particularly in social security, health insurance, and wages (MEHE, 2018).
- **Weak institutional capacity and coordination:** Limited coordination between ministries, and under-resourced TVET institutions hinder effective WBL implementation and follow-up.
- **Monitoring and quality assurance deficiencies:** There is no unified Monitoring and Evaluation (M&E) system for WBL, and Lebanon's NQF is not operationalized.
- **Low recognition of non-formal pathways:** CBT graduates from non-formal programs often receive certificates from third parties, but these are not formally recognized by national authorities.
- **Limited Private Sector Engagement:**
 - Small and Medium Enterprises (SMEs) lack financial and institutional capacity to host trainees (World Bank, 2023)¹.
 - Employers have **weak or limited engagement** in designing, implementing, and evaluating WBL programs.
- **Poor Alignment with Labor Market Needs:** Curricula remain outdated and not demand-driven.
- **Insufficient Infrastructure and Staff:** TVET institutes lack modern facilities and trained company mentors.
- **Societal Biases:** TVET is often perceived as a “second-class” option, discouraging student enrolment and family support (UNESCO, 2020)².
- **Financial and Structural Constraints**
 - WBL is mainly funded by NGOs, with insufficient government financial resources to expand and regulate apprenticeship schemes.
 - There are no clear criteria for selecting workplaces for apprenticeship training.
- **Mismatched Training and Employment Needs**
 - Apprenticeships in SMEs often follow daily operational tasks rather than structured training aligned with learning objectives.
 - There is no official certification for company trainers or technicians training apprentices.
 - Lack of TVET graduate tracking (tracer studies) and weak employment services for WBL trainees.

¹ World Bank. (2023). *Building Better TVET Systems in Low-Income Countries*. Washington, DC: World Bank Publications.

² UNESCO. (2020). *Work-Based Learning in Lebanon: Policies and Practices*. Paris: United Nations Educational, Scientific and Cultural Organization.

3.1.4 Recommendations for System Strengthening

To enhance the quality, sustainability, and impact of WBL in Lebanon, the following actions are recommended:

- Update the legal framework to formally recognize apprentices as protected workers (MEHE, 2018) and formalize donor-piloted regulatory instruments (e.g. MoUs, WBL implementation protocols, assessment templates) through DGVTE-led decrees or circulars.
- Adopt a national WBL strategy with clearly defined institutional mandates. This strategy could be developed through a multi-stakeholder taskforce including DGVTE, employers' associations, and donor agencies, ensuring alignment between public policy priorities and private sector needs.
- Offer tax and wage subsidies to incentivize company participation in WBL programs.
- Develop national WBL standards including defined learning outcomes and certification processes.
- Establish dedicated WBL coordination units within TVET institutions to support implementation.
- Introduce national tracer studies and labor market dashboards to monitor outcomes and guide policies (ILO & UNICEF, 2022).¹
- Develop a unified monitoring, evaluation, and certification system.
- Improve access, equity, and social perception by implementing nationwide awareness initiatives that highlight success stories of WBL graduates and by engaging media outlets, social partners, and digital platforms to position vocational career paths as inclusive, future-oriented, and attractive for youth and employers alike.

3.2 WBL Programs in Lebanon – Contributions to National Strategic Framework Objectives

3.2.1 Institutional Initiatives Supporting WBL

- **ILO-SAFADI Foundation Project (2023–2024):** Delivered sector-specific training in agrifood, solar energy, healthcare, and crafts to 80 participants using a blended 20/80 model (in-class training / On-the-Job Training (OJT)). The program offered post-training counseling and skills profiling (ILO, 2023).²

¹ ILO & UNICEF. (2022). *WBL Implementation Manual*. Beirut: Joint Technical TVET Reform Series.

² ILO. (2023). *WBL Programme with SAFADI Foundation*. Beirut: International Labour Organization.

- **ILO-UNICEF Joint Programme (2017–2023):** Supported the establishment of Education Management Information System (EMIS), CBT, and labor market assessments across the TVET sector (ILO & UNICEF, 2022).¹
- **Caritas & SPARK² Projects:** Offered targeted WBL training for marginalized youth and women, including incubator support and job placement services for startup graduates (SPARK, 2023; Caritas Lebanon, 2024).³
- **IECD – Maharat Li Loubnan (2017–2021; extended 2021–2024):** Delivered short- and long-term vocational training with integrated on-the-job components, targeted marginalized youth and refugees, and supported entrepreneurship, reaching over 1,165 beneficiaries (50% women, 30% refugees) across key regions.
- **United Nations High Commissioner for Refugees (UNHCR) and World Food Programme (WFP) Non-Formal WBL Programs:** Offer short-term skills training with embedded internships for displaced populations. While more humanitarian, these models influence non-formal WBL practices and are often implemented in cooperation with Lebanese NGOs and private sector entities.
- **GIZ Own Projects: (QuA-VET, ProVTE, VTE4all):** These projects are **at the heart of WBL development** in Lebanon. They piloted **CBT/CBA modules** across sectors (health inspection, industrial mechanics, etc.), provided **ToT** for TVET instructors and assessors, established and activated **SABs**, which generated recommendations to DGVTE, assessed and issued **third-party certificates** for non-formal CBT graduates.

3.2.2 Tools and Frameworks Contributing to QuA-VET

- **WBL Implementation Manual:** Standardizes WBL practices, outlines stakeholders' roles, and harmonizes training cycles (ILO & UNICEF, 2022).
- **CBT Manuals:** Modular training templates designed to align vocational education with labor market needs. Developed and piloted by the Directorate General for Vocational and Technical Education (DGTE) in partnership with ILO and GIZ, as part of various WBL support programs (e.g., 2022–2024 pilot projects under the TVET National Strategy).
- **Houkouki App:** A mobile application launched in 2022 by ILO Lebanon in collaboration with the Ministry of Labour (MoL) and supported by the EU. It educates young trainees and interns on their rights, responsibilities, and protections during workplace-based learning and internships.
- **SABs' recommendations:** As main part of their advisory role, SABs established under QuA-VET have produced a series of actionable recommendations to

¹ ILO & UNICEF. (2022). *WBL Implementation Manual*. Beirut: Joint Technical TVET Reform Series.

² SPARK Foundation (International NGO supporting education & entrepreneurship).

³ SPARK. (2023). *STEP Program Annual Report: Lebanon and Jordan*. SPARK Global; Caritas Lebanon. (2024). *Work-Based Learning Program Report*. Beirut.

DGTVE. These include Integrating CBA into formal curricula, Certifying trainees in non-formal CBT programs.

- **CBA manual:** It defines the standards, procedures, and evidence criteria for assessing trainees and students based on demonstrable competencies, rather than theoretical knowledge. Developed under GIZ's VTE4all project.

3.2.3 Digital Monitoring and Skills Matching Tools

- **SkillMap and a Skills Tracker tool¹:** To support Lebanon's transition toward a digital skills ecosystem, the ILO through the Employment Promotion in Lebanon (EPL) project of GIZ (2021–2023) and the ongoing Partnership for improving prospects for forcibly displaced persons and host communities (PROSPECTS) programme, introduced digital profiling tools such as **SkillMap** and a **Skills Tracker tool**. These tools were implemented in collaboration with partners including the Safadi Foundation and Association of Volunteers in International Service (AVSI).

SkillMap enables individuals to create detailed skills profiles and compare them with job requirements and training opportunities, while the Skills Tracker tool monitors learners' progress along training and employment pathways. Together, these tools aim to strengthen career guidance, skills-based job matching, and curriculum alignment with labour market needs, particularly for youth and vulnerable groups.

- **EMIS Pilot:** As of May 2022, an EMIS has been piloted in 35 public technical (TVET) schools under MEHE, supported by ILO (with stakeholder involvement including UNICEF), to strengthen data systems for education planning. Integrating WBL-specific modules into EMIS could help track trainee participation, employer engagement, and labor market outcomes, ensuring WBL programs are aligned with national skills development priorities.
- **Moodle LMS:** Moodle Learning Management System (LMS) is actively used under the QuA-VET project by MEHE / GIZ for teacher training, monitoring student progress, and delivering e-learning content across BT1/BT2 and related tracks. There are also Moodle-based modules for SAB capacity building. Its flexibility and demonstrated use in digital teaching, monitoring, and staff development suggests that it could be in the future adapted to support WBL programs for monitoring, supervision, and blended training.

3.2.4 Alignment with the National Strategic Framework (NSF) 2018-2022

The reviewed WBL initiatives contribute directly to the priorities of Lebanon's NSF for TVET 2018–2022, which calls for improving access, quality, and labor market relevance

¹ SkillMap includes profiling the skills of individuals, job descriptions at MSMEs, and available training offers. The data collected is used for career guidance, skills-based job matching, and referring individuals to relevant training that addresses their identified skills gaps. The Skills Tracker tool, developed under PROSPECTS, monitors learner progress across training and employment pathways, supporting evidence-based decision-making for skills programming.

in vocational education. Programs introducing CBT and assessment (CBA), expanding digital learning and monitoring tools such as EMIS and Moodle, and strengthening school–industry collaboration through SABs all address NSF goals on modernizing curricula, enhancing governance, and fostering stronger employer engagement. In addition, targeted interventions for marginalized youth, women, and refugees align with the NSF's emphasis on inclusivity and equitable access, while standardized WBL manuals, certification systems, and labor market tracer studies support its vision for quality assurance and evidence-based policymaking across the TVET sector.

3.2.5 Annex: Case Boxes (Available Separately)¹

Detailed descriptions of ILO, Caritas, SPARK², and World Bank initiatives have been moved to the Annex for reference without disrupting narrative flow.

4 Comparison with International Best Practices

4.1 Analysis and Benchmarking of TVET Country Profiles (UNEVOC UNESCO)³

The table [\(Annex4\)](#) compares TVET and key educational, economic, and labor market indicators across Belgium, Germany, Denmark, Iraq, Jordan, Egypt, and Lebanon.

4.2 Key Findings⁴

4.2.1 Vocational Education Enrolment

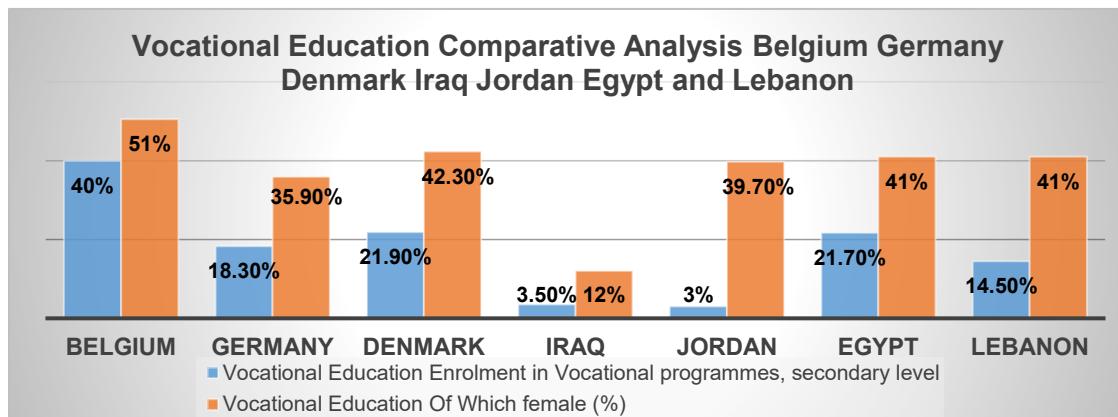
- **Highest enrolment:** Belgium (40%) leads in vocational program enrolment at the secondary level, followed by Egypt (21.7%) and Denmark (21.9%).
- **Lowest enrolment:** Iraq (3.5%) and Jordan (3%) have the lowest participation, signaling weak vocational training integration into the education system.
- **Lebanon:** Stands at 14.5%, higher than Iraq and Jordan but significantly lower than Belgium and Germany.

¹ Annex 3 WBL Case Boxes.

² SPARK. (2023). STEP Program Annual Report: Lebanon and Jordan. Amsterdam: SPARK Global.

³ UNESCO-UNEVOC. (2021). Promoting Quality in TVET Through Work-Based Learning: Global Review. Bonn: UNESCO-UNEVOC International Centre.

⁴ The data related to the figures in the Key Findings is extracted from the profiles compiled by UNESCO-UNEVOC in 2021 for Belgium, Germany, Denmark, Iraq, Jordan, Egypt and Lebanon except for the data related to the Institutional Capacity, which are compiled by UNESCO-UNEVOC in 2019 for all countries. They are provided for contextual comparison only and are not adjusted for population size or per capita measures.

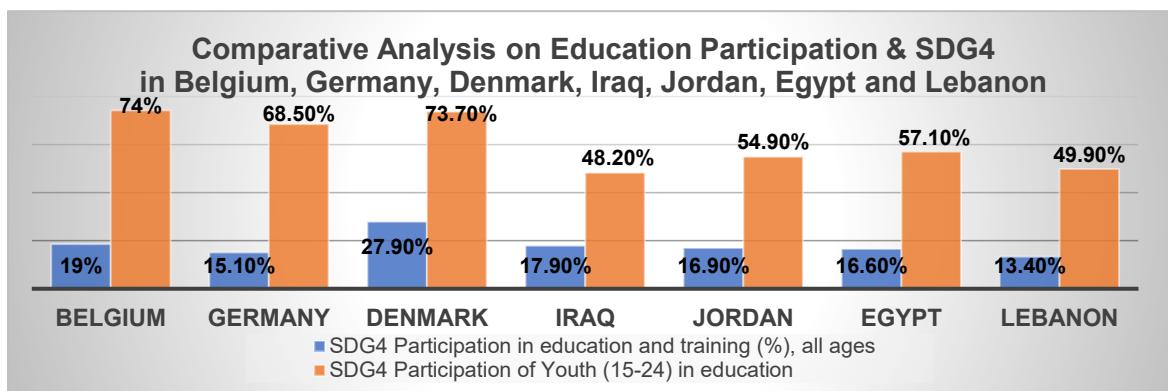


4.2.2 Female Participation in TVET

- **Best performers:** Belgium (51%), Denmark (42.3%), Egypt & Lebanon (41%), and Jordan (39.7%) show strong female participation.
- **Lowest female participation:** Iraq (12%) has a significant gender gap, suggesting major barriers for women in vocational education.

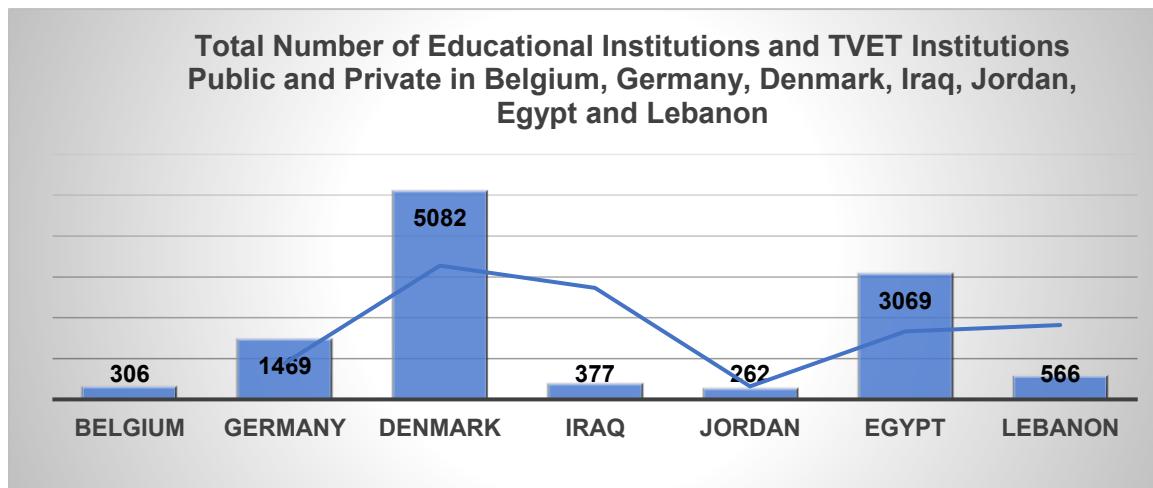
4.2.3 Education Participation & Sustainable Development Goals (SDG)4

- **Youth Participation in Education (15-24 years old):** Denmark (73.7%) and Belgium (74%) have high participation, while Iraq (48.2%) and Lebanon (49.9%) lag behind.
- **Overall participation in education and training:** Denmark (27.9%) leads, while Lebanon (13.4%) has the lowest rate, indicating gaps in lifelong learning opportunity opportunities.



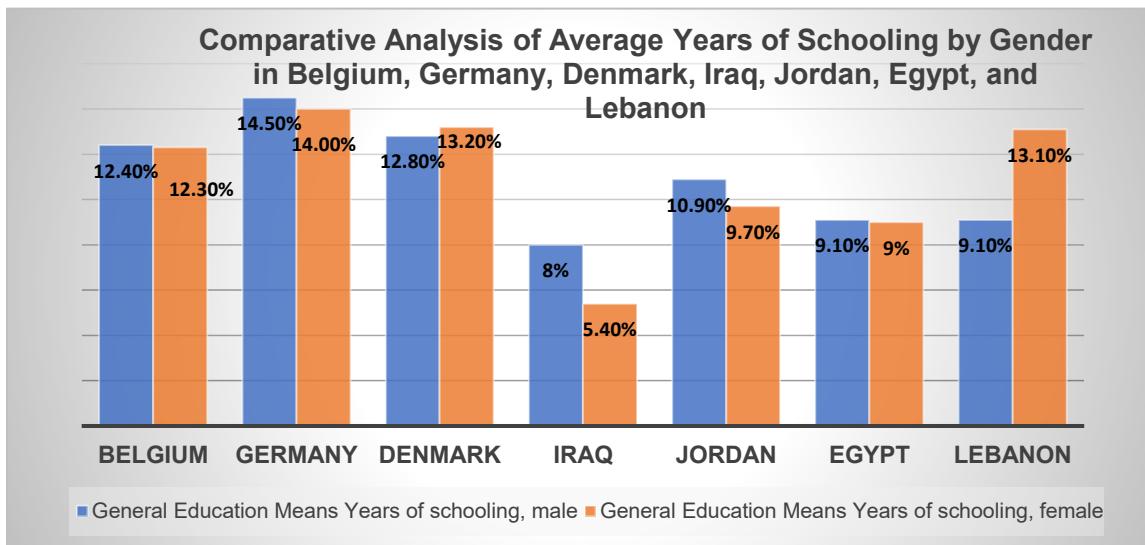
4.2.4 Educational Institutions

- **Denmark (5082 institutions)** has an extensive TVET infrastructure, whereas Iraq (377) and Jordan (262) have relatively low numbers.
- **Lebanon (566 institutions)** is doing better than Jordan and Iraq but is far behind Denmark and Germany.



4.2.5 General Education (Average Years of Schooling)

- **Highest schooling years (male):** Germany (14.5 years).
- **Lowest schooling years (male):** Iraq (8 years), Lebanon (9.1 years).
- **Gender gap:** Iraq has a significant gender disparity (8 years for males, 5.4 years for females). Lebanon shows a positive trend with females (13.1 years) surpassing males (9.1 years).



4.2.6 Government Expenditure on Education and TVET

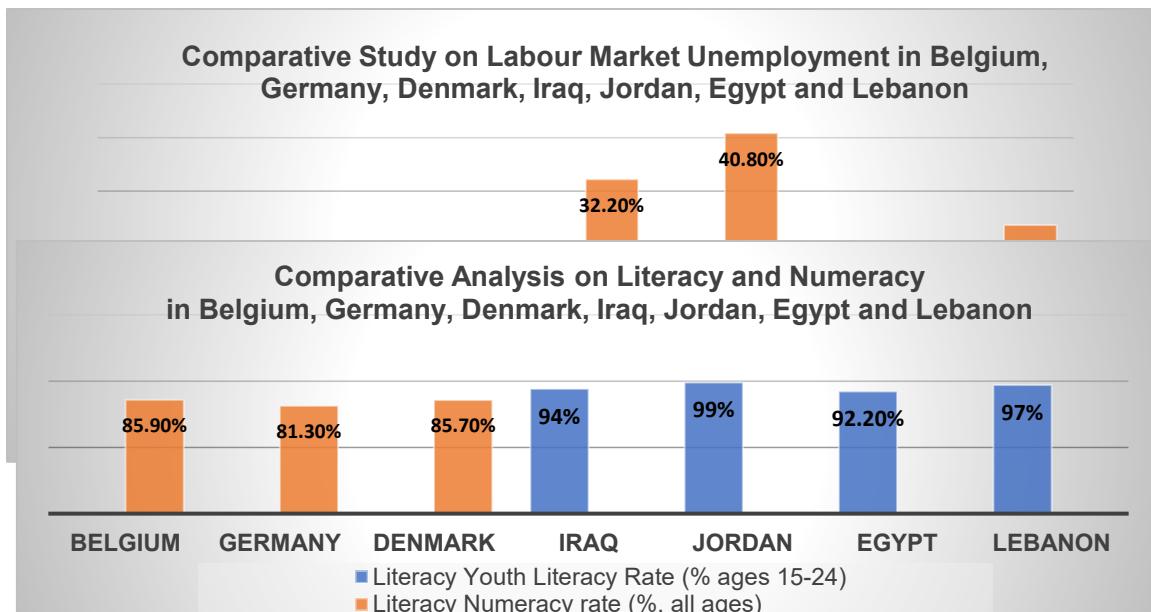
- **Highest investment:** Germany (USD 233 billion) and Belgium (USD 38 billion).
- **Lowest investment:** Lebanon (USD 1.1 billion) and Jordan (USD 1.5 billion).
- **TVET funding:** Germany (USD 21.9 billion) leads, whereas Lebanon, Jordan, and Iraq lack clear data on their TVET investments.

4.2.7 Economic Performance

- **GDP size:** Germany (USD 4,526 billion) and Belgium (USD 645 billion) have strong economies. Lebanon (USD 21 billion) has the smallest GDP.
- **GDP growth:** Egypt (3.8%) and Jordan (2.6%) show positive growth, while Lebanon (-0.6%) and Iraq (-2.9%) are experiencing economic contraction.

4.2.8 Labor Market Performance

- **Unemployment:** Lebanon (11.6%), Jordan (17.9%), and Iraq (15.5%) have high unemployment compared to Germany (3%).
- **Youth unemployment:** Jordan (40.8%) and Iraq (32.2%) have alarming youth unemployment rates, while Germany (6%) and Denmark (12%) perform significantly better.



4.2.9 Literacy & Numeracy

- **Youth literacy rates:** Jordan (99%), Lebanon (97%), and Iraq (94%) have strong youth literacy, while Germany (81.3%) lags behind.
- **Numeracy rate:** Belgium (85.9%), and Denmark (85.7%) have strong numeracy.

4.2.10 Demographics

- **Largest youth population (15-24 years old):** Egypt (19 million), Iraq (8.8 million), and Germany (8.2 million).
- **Lebanon:** Has a small youth population (901,000), impacting workforce development.

4.3 Comparative Benchmarking and Evaluation of Strategic Insights

(UNEVOC UNESCO)

The international benchmarking conducted across Belgium, Germany, Denmark, Iraq, Jordan, Egypt, and Lebanon provides key evidence to identify Lebanon's strengths, weaknesses, and reform opportunities in the development of inclusive, market-responsive Work-Based Learning (WBL) and TVET systems.

4.3.1 Vocational Education Enrolment Rates: Structural Gaps in System Attractiveness

- **Benchmark:** Belgium (40%) and Germany (~50%) lead in secondary-level vocational education enrolment.
- **Lebanon's Position:** With an enrolment rate of **14.5%**, Lebanon underperforms compared to global best practices and even regional peers like Egypt (21.7%).
- **Conclusion:** This low enrolment reflects a combination of societal stigma, inadequate guidance services, and lack of diversified, modern vocational offerings aligned with labor market needs.

→ **Implications for national TVET authorities and stakeholders:** To increase enrolment among vulnerable youth, national reforms should aim to:

- Improve the public image of TVET through coordinated awareness campaigns, supported by SABs and Guidance and Employment Offices (GEOs), that showcase success stories, career opportunities, and strong links with the private sector.
- Integrate structured career guidance and orientation programs in lower secondary schools, supported by trained counselors and collaboration with TVET institutions.
- Expand flexible learning pathways, including bridge programs and modular courses, to allow learners to shift between general and vocational streams without stigma or penalty.
- Promote WBL models as attractive, hands-on alternatives that lead to tangible employment outcomes.

4.3.2 Female Participation in TVET: A Relative Bright Spot for Lebanon

- **Benchmark:** Lebanon (41%) is on par with Egypt (41%) and close to Denmark (42.3%).
- **Strength:** This shows promising gender inclusivity.
- **However:** Sectoral concentration is likely. Most female trainees are found in health, education, or services, while technical and industrial fields remain male-dominated.

→ **Implications for national TVET authorities and stakeholders:** To promote gender equity across all TVET domains, they can play a proactive role by:

- Developing gender-sensitive career orientation modules in schools and training centers, showcasing role models from non-traditional fields (e.g., women in

renewable energy, automotive maintenance, Information and Communication Technology (ICT)).

- Engaging private sector partners to offer female-targeted internships and apprenticeships in male-dominated sectors, with incentives for companies demonstrating inclusive hiring and training practices.
- Ensuring safe and accessible learning environments through improved facilities (e.g., gender-separated changing rooms, transport allowances, anti-harassment policies).
- Supporting upskilling programs for women already working in informal or low-skill jobs to transition into higher-value trades.

4.3.3 Institutional Infrastructure and Capacity: Quantity vs. Quality

- **Benchmark:** Denmark has over 5,000 institutions delivering TVET.
- **Lebanon's Reality:** 566 TVET institutions (public and private) exist, exceeding Jordan (262) and Iraq (377), yet quality remains a major concern.
- **Gap Identified:** Many institutions lack modern equipment, qualified instructors, and active links to the labor market.

→ **Implications for national TVET authorities and stakeholders:** Efforts should prioritize improving the quality of existing institutions rather than expanding their number. This transformation can be supported by:

- Upgrading training infrastructure and labs in selected pilot institutions through targeted investment in equipment aligned with labor market needs (e.g., solar energy kits, food safety labs, industrial automation panels).
- Supporting trainer capacity-building programs, including ToT on WBL pedagogy, digital teaching tools, and competency-based instruction.
- Facilitating public-private collaboration mechanisms such as sector-specific advisory boards or MoUs between schools and companies for WBL programs.
- Developing and disseminating quality assurance guidelines, model curricula, and standardized assessment tools to improve consistency across institutions.
- Introducing institutional self-assessment tools to identify weaknesses and track progress toward WBL readiness and quality standards.

4.3.4 Labor Market Alignment & Unemployment Trends: Disconnect Evident

- **Benchmark:** In countries like Germany, strong dual training systems are widely recognized as one contributing factor to better labor market alignment and lower youth unemployment (around 6%), alongside broader economic and labor policies.
- **Lebanon's Reality:** Youth unemployment is very high (estimated 30–40%), while employer satisfaction with TVET graduates is low.
- **Conclusion:** Although many factors drive unemployment, the limited integration of practical, workplace-based learning within Lebanon's TVET system clearly contributes to the mismatch between training outputs and labor market needs.

→ **Implications for national TVET authorities and stakeholders:** To strengthen labor market alignment and make TVET more employment-relevant, the following actions are recommended:

- Establishing Sector Skills Councils or Employer Committees to co-develop occupational standards, training content, and certification frameworks aligned with market needs.
- Expanding WBL models in partnership with private firms, linking theoretical training in TVET schools with structured in-company internships or apprenticeships.
- Embedding employer-designed assessment methods, including practical exams, workplace performance evaluations, and certification based on demonstrated competencies.
- Creating a national WBL placement platform (digital or hybrid) to match students with firms offering internships or apprenticeships, ensuring regional and sectoral coverage.
- Raising employer awareness about the benefits of participating in WBL programs through communication campaigns, fiscal incentives, or public recognition schemes.

By fostering a co-ownership model between TVET providers and employers, national TVET authorities and stakeholders can make WBL a systematic pathway to employment and gradually reducing youth unemployment and improving workforce competitiveness.

4.3.5 Government Investment: Underfunding Constrains Reform

Note: Cross-country comparisons of absolute TVET expenditure figures should be interpreted with caution. In Lebanon, the lack of an official population census and the presence of a large refugee population make per capita calculations unreliable. The figures presented here reflect total national spending and are intended to highlight funding gaps and policy priorities rather than provide direct per-person comparisons.

- **Benchmark:** In some Organisation for Economic Co-operation and Development (OECD) countries, expenditure on upper secondary vocational programs accounts for approximately 1.5%–2% of total government expenditure. For example, Belgium spends around 1.8%. (OECD, *Education at a Glance 2023*).
- **Lebanon's Reality:** Public spending on education is about 1.67% of GDP (2020), but the share of TVET within the national education budget is not officially reported. Stakeholder interviews suggest it remains marginal compared to general and higher education allocations.
- **Conclusion:** Without a dedicated and transparent TVET budget line, Lebanon risks underfunding critical reforms such as curriculum modernization, WBL scale-up, teacher training, and infrastructure investment.

→ **Implications for national TVET authorities and stakeholders:** To support systemic change, they can actively contribute by promoting sustainable financing mechanisms and targeted investment models. Examples of interventions include:

- Advocating for a dedicated TVET budget line within the national education strategy, including clear annual allocations for WBL implementation, teacher training, and infrastructure modernization.
- Promoting co-financing models where the government shares the cost of training programs with employers (e.g., salary subsidies for apprentices, tax credits for firms offering in-company training).
- Supporting the establishment of a National Training Fund, inspired by international models of TVET financing such as Jordan to diversify and protect TVET funding (UNESCO, Jordan TVET System Review, 2024), to pool donor, public, and private sector contributions for vocational education, including WBL/apprenticeship components where feasible.
- Building evidence through cost-benefit analyses of WBL pilots to highlight return on investment (ROI) and long-term economic impact of scaling TVET reforms.
- Proposing regional hubs: e.g., potential centers of excellence or coordination units at the regional level, to channel donor alignment (EU, GIZ, UNICEF, Agence Française de Développement (AFD), ILO) and technical/financial support into underserved sectors..

4.3.6 Lifelong Learning Participation & SDG4 Gaps: Missed Opportunity for Skills Resilience

- **Benchmark:** Denmark shows 27.9% participation in education/training among adults.
- **Lebanon's Reality:** Only 13.4% participate in education and training after school age.
- **Conclusion:** The system is not geared to support reskilling/upskilling or non-traditional learners (e.g., youth Not in Education, Employment, or Training (NEET), informal workers).

→ **Implications for national TVET authorities and stakeholders:** To bridge this gap and contribute to SDG 4 (inclusive and equitable quality education and lifelong learning), promote innovative, accessible learning solutions such as:

- Supporting the development of modular and stackable certification programs that allow adult learners to gradually build competencies in key economic sectors (e.g., solar installation, food processing, caregiving).
- Strengthening collaboration with NGOs and community-based organizations to deliver short, non-formal TVET programs in rural or underserved regions, targeting vulnerable groups with flexible schedules and basic literacy components.
- Piloting RPL mechanisms to validate and accredit skills acquired through informal work, enabling adult learners to access formal TVET pathways or employment opportunities.
- Expanding blended and digital learning models for working learners, such as evening/weekend classes and mobile-based microlearning in coordination with training centers and employers.

- Engaging municipalities and unions in awareness campaigns to promote youth learning as a right and an economic necessity, linked to local economic recovery strategies.

4.3.7 Literacy: Competitive but Uneven Skills Base

- **Lebanon's Reality:** Lebanon's youth literacy is 97%.
- **Conclusion:** Academic readiness is not the main issue, rather, the lack of soft skills, digital skills, and practical work-readiness limit graduates/trainees employability.

→ **Implications for national TVET authorities and stakeholders:** To close this readiness gap and support a more holistic skills development approach:

- Integrate soft skills modules (communication, teamwork, time management, problem-solving) into WBL programs and technical curricula, especially during preparatory phases.
- Expand digital literacy training across TVET institutions by embedding basic ICT, cybersecurity, and digital tools (e.g., Excel, data entry, virtual collaboration platforms) into all technical fields.
- Promote simulated workplace environments in schools (e.g., mini-enterprises, mock service counters, labs that replicate real job settings), to help students apply theoretical knowledge in context.
- Support cross-sectoral bootcamps and life skills workshops in collaboration with employers, NGOs, and career centers to prepare learners before entering real workplaces.
- Introduce contextualized numeracy training within TVET modules, linking math learning directly to the sector needs (e.g., measurement in construction, dosing in food production, ratios in electricity).

By embedding transversal skills and applied competencies into the learning process, national TVET authorities and stakeholders can help ensure that Lebanese TVET graduates are not only literate but truly work-ready.

4.4 Strategic Conclusions & Policy Linkages

This benchmarking demonstrates that:

- Lebanon's TVET system is not underbuilt in terms of institutions but is underperforming due to limited capacity, inadequate funding, and negative societal perceptions.
- There is strong potential to reform the system using WBL models, CBT, and structured employer engagement, drawing lessons from Germany and Denmark.
- Lebanon must leverage its existing assets such as relatively high female participation in TVET and high youth literacy to create inclusive and market-driven pathways for vulnerable groups.

- Regional peers like Egypt and Jordan are also struggling, which makes Lebanon's reform leadership in WBL an opportunity for regional learning.
- Additionally, Lebanon can capitalize on existing pilot programs and tools already developed through initiatives such as CBT, CBA, SABs, and projects led by ILO, UNICEF, IECD, and other international partners. These efforts form a solid foundation for institutionalizing and scaling WBL within a national, sustainable framework.

Policy Alignment and Contribution to SDG 4

These strategic conclusions directly support Lebanon's efforts to achieve **SDG 4**, particularly Target 4.3 (equal access to technical and vocational education) and Target 4.4 (relevant skills for employment and entrepreneurship). By leveraging existing strengths, such as high youth literacy and female participation while addressing systemic weaknesses, Lebanon can build a more inclusive and responsive TVET system. The recommended reforms also align with the **NSF (2018–2022)**, especially its pillars on quality, relevance, and governance. Given the expiration of the current NSF, the findings from this benchmarking provide an opportunity to **inform a new or updated national TVET strategy** that is explicitly aligned with Work-Based Learning (WBL) and international standards. Through QuA-VET, these findings can be translated into concrete policies, **regulatory instruments, and digital tools**, and partnerships that strengthen collaboration across the public–private ecosystem and promote **equitable, employment-focused, and future-ready WBL models**.

5 Benchmarking: Strengths and Weaknesses

Category	Best Performer(s)	Lebanon's Position	Weakest Performer(s)
TVET Enrolment (%)	Belgium (40%)	14.5% (Low)	Iraq (3.5%), Jordan (3%)
Female TVET Participation (%)	Belgium (51%)	41% (Good)	Iraq (12%)
Youth Education Participation (%)	Belgium (74%), Denmark (73.7%)	49.9% (Low)	Iraq (48.2%)
TVET Institutions (Total)	Denmark (5022)	566 (Moderate)	Jordan (262)
Govt. Education Expenditure (USD million)	Germany (233,388)	1,141 (Very Low)	Jordan (1,538)
GDP (USD billion)	Germany (4,526)	21 (Very Low)	Jordan (51)
Unemployment Rate (%)	Germany (3%)	11.6% (High)	Jordan (17.9%)
Youth Unemployment (%)	Germany (6%)	23.7% (High)	Jordan (40.8%)
Youth Literacy Rate (%)	Jordan (99%)	97% (High)	Egypt (92.2%)
Numeracy Rate (%)	Denmark (85.7%)	No Data	Germany (81.3%)

The above table provides a comparative benchmarking analysis of Lebanon's TVET sector and Work-Based Learning (WBL) performance against best performers and weakest performers worldwide. The analysis focuses on key indicators, including enrolment rates, institutional presence, government expenditure, economic context, and labor market outcomes.

5.1 Analysis of TVET and Work-Based Learning (WBL) Benchmarking in Lebanon compared to leading European models and Neighbouring Countries

5.1.1 Strengths:

- Moderate TVET infrastructure:** With **566 TVET institutions (~168 Public and ~398 Private)**, Lebanon has a better-developed vocational training infrastructure than some neighboring countries.

Lebanon historically prioritized access to vocational education through public and private partnerships. Donor-funded projects and private NGOs played a strong role, especially post-crisis (Syrian refugee influx, economic decline). However, the quality of these institutions is uneven; we consider many lacks like qualified trainers, modern tools and labs, and links to industries for WBL.

- **Strong female participation:** At 41%, female enrolment in TVET is relatively high. TVET programs in sectors like healthcare, beauty, teaching, and social services are more socially accepted for women. I/NGOs often provide targeted programs for girls and women in these fields. However, participation remains concentrated in traditional roles. Engineering, ICT, and skilled trades are male dominated. To foster improvement, it is recommended to incentivize female participation in high-growth, non-traditional sectors through scholarships, role models, and safe learning environments.
- **High youth literacy rate:** At 97%, literacy levels are strong, supporting foundational education for vocational training.
There is a strong cultural focus on basic education and high school attendance, with families prioritizing enrolment despite economic challenges.
However, literacy rates are not reflected in numeracy, digital skills, or employability skills, leaving many students unprepared for the workforce.
To improve this, it is recommended to introduce career guidance, digital literacy, and soft skills training early in secondary education to better prepare students for TVET and Work-Based Learning (WBL) programs.

5.1.2 Weaknesses:

- **Low TVET enrolment:** At 14.5%, vocational training is still underutilized, limiting workforce development.
- **Severe underfunding:** With only \$1.14 billion allocated to education, Lebanon is far behind even Jordan.
- **High youth unemployment:** At 23.7%, many young graduates, including TVET students, struggle to enter the workforce.
- **Weak linkage to the labor market:** The data suggests that TVET does not sufficiently bridge the gap between education and employment.

Lebanon's low education spending around USD 1.1 billion is constrained by economic crisis, high debt, and competing priorities like health and refugee needs. TVET receives little funding due to fragmented governance across MEHE, DGTVE, and NGOs, with most progress relying on donor support. This results in weak infrastructure, undertrained staff, and limited private sector engagement in Work-Based Learning (WBL). To address this, Lebanon should establish a dedicated TVET budget line and promote Public-Private Partnerships (PPPs). Scaling up proven pilot models and investing in career guidance can drive more sustainable and impactful reforms.

5.2 Challenges & Recommendations

- **Low TVET enrolment (14.5%)** → Requires stronger policy incentives to encourage vocational training.
- **Low government spending on education (USD 1.1 billion)** → Needs more investment in TVET programs and infrastructure.
- **High unemployment (11.6%) and youth unemployment (23.7%)** → Strengthen work-based learning and link TVET to the labor market.
- **Low GDP (USD 21 billion) and negative growth (-0.6%)** → Develop skills-based industries and entrepreneurship programs to boost economic recovery.

While full alignment with high-performing TVET systems such as those in Belgium and Germany may not be immediately feasible, Lebanon can draw on their key principles such as employer engagement, dual training, and digital learning to adapt scalable, resource-sensitive reforms. Priority actions may include:

1. Gradually increasing public and donor investment in targeted TVET initiatives.
2. Strengthening public-private partnerships to co-design apprenticeships and training pathways.
3. Updating curricula to integrate labor market-relevant skills and basic digital literacy.
4. Promoting entrepreneurship and soft skills to enhance graduate employability, especially in informal and emerging sectors.

5.3 Conclusion

Lebanon has a moderately developed TVET infrastructure but faces challenges in enrolment, funding, and labor market integration. Addressing these gaps through policy reforms, investment in work-based learning, and private-sector engagement will be key to enhancing the effectiveness of TVET and improving employment outcomes for youth.

While fully replicating the German or Belgian TVET models may be unrealistic for Lebanon due to fiscal and institutional constraints, the country can strategically adopt key elements suited to its context. By building local WBL clusters with strong industry engagement, Lebanon can foster practical, demand-driven skills development. Institutionalizing CBT with private sector participation will help align learning outcomes with market needs. Establishing blended financing mechanisms that combine public, private, and donor contributions will ensure more sustainable TVET funding. Finally, prioritizing career readiness and life skills in both formal and non-formal programs will better equip vulnerable youth for employability and entrepreneurship.

6 Stakeholder Engagement

6.1 Interviews and discussions with key public and private sector representatives

6.1.1 Interviews and discussions with TVET Institutions.

After reaching out to numerous TVET institutions across Lebanon, including regions such as Bekaa, North, Akkar, Baalbek, Mount Lebanon, South, and Nabatieh, information was collected from 17 TVET institutions across Lebanon through a brief survey. These TVET institutions offer a variety of technical specializations, including hospitality, nursing, accounting, IT, early childhood education, and industrial fields.

6.1.2 Regional Analysis of TVET Schools

This analysis incorporates data from 17 pre-selected public TVET schools involved in the QuA VET project, spanning six regions of Lebanon, along with sector-specific insights into Agro-food and Internet of Things (IoT) industries. The primary goal is to harmonize educational and workforce strategies, improve Work-Based Learning (WBL) opportunities, and foster smart, inclusive growth within these sectors ([Annex 6](#)).

The analysis uses available data on total TVET students' numbers and the regional distribution of participating schools. However, due to limited information provided by TVET authorities, a more comprehensive evaluation would require factoring in additional variables such as student-teacher ratios, instructor qualifications, and the technological infrastructure in schools serving the Agro-food and IoT sectors. Moreover, the existence of a SAB alone does not necessarily indicate effective collaboration between TVET institutions and the labor market; further in-depth analysis is needed to assess the actual functioning and impact of these SABs.

1. Akkar Region:

Schools: 5; **Students:** 4,420; **Specializations:** 4 in Baccalauréat technique (BT) Hospitality, 5 in Management Information System (Informatique de gestion); **SAB Involvement:** 4 schools.

Insights: Akkar demonstrates strong potential for advancing Work-Based Learning (WBL), with high student enrolment and active engagement in School Advisory Boards across most schools. These are promising foundations for piloting WBL initiatives. However, to fully harness this potential, further analysis is needed to understand the local labor market landscape, particularly the availability, capacity, and willingness of companies to host learners. Strengthening partnerships with the private sector in Akkar could unlock valuable opportunities for students, making the region a strong candidate for future WBL implementation.

2. Baalbeck Region:

Schools: 2; **Students:** 2,485; **Specializations:** 1 in BT Hospitality, 2 in Management Information System (Informatique de gestion); **SAB Involvement:** 2 schools.

Insights: Although Baalbeck's two public TVET schools report solid enrolment and established School Advisory Boards, the region faces serious limitations for Work-Based Learning. The general security situation following recent conflict has weakened the local economy, discouraged private sector investment, and reduced companies'

willingness to host students. Additionally, while SABs exist, their activity and influence remain unclear. These conditions call for cautious planning and further assessment before considering Baalbeck for WBL pilot implementation.

3. Bekaa Region:

Schools: 3; **Students:** 1,255; **Specializations:** 2 in BT Hospitality, 3 in Management Information System (Informatique de gestion); **SAB Involvement:** 1 school.

Insights: The Bekaa region is home to three public TVET schools with relevant specializations in IT and Hospitality, but only one school reports an active School Advisory Board, highlighting weak institutional links with the private sector. Nevertheless, Bekaa presents a strong foundation for Work-Based Learning, especially in the Agro-food sector. As Lebanon's largest agricultural hub, the region hosts a diverse network of farms, agro-processing SMEs, and cooperatives, many of which are supported by international programs aimed at modernizing production and supply chains. While the IoT sector remains limited, there is growing interest in applying smart technologies to agriculture, offering future potential for Agro-IoT WBL opportunities. With strengthened SAB governance and better engagement with these active value chains, Bekaa is well positioned to pilot practical, sector-relevant WBL initiatives.

4. Mount Lebanon Region:

Schools: 1 (Dekwaneh); **Students:** 450; **Specializations:** 1 in BT Hospitality only; **SAB Involvement:** None.

Insights: Despite being located in one of Lebanon's most economically dynamic regions, the survey in Mount Lebanon covered only a single TVET school in Dekwaneh, which offers only Hospitality training and lacks a School Advisory Board. This limits both sectoral diversity and formal engagement with the private sector. However, the region hosts a dense concentration of businesses, hotels, and service companies, offering significant potential for Work-Based Learning if institutional capacity is strengthened. Program diversification and active partnerships with employers are urgently needed to align TVET with the economic landscape of the region.

5. Nabatieh Region:

Schools: 2; **Students:** 1,668; **Specializations:** 2 in BT Hospitality, 2 in Management Information System (Informatique de gestion); **SAB Involvement:** 1 school.

Insights: Nabatieh's two public TVET schools offer specializations in both Hospitality and IT, providing a balanced curriculum that can serve diverse labor market needs. However, only one school reports having a School Advisory Board, which limits structured cooperation with the private sector. While the region benefits from relative stability and moderate economic activity, its readiness for Work-Based Learning would require stronger SAB governance and more proactive engagement with local employers to create meaningful WBL opportunities.

6.1.3 Key Findings

The analysis of 17 selected public TVET schools, while not representative of all public TVET institutions, provides indicative insights into regional readiness for Work-Based Learning (WBL):

- **Akkar** demonstrates high potential for WBL piloting, with strong student enrolment and active SABs, though deeper employer mapping is needed.
- **Bekaa** offers promising opportunities in agro-food and emerging IoT applications. However, weak SAB engagement highlights the need for stronger governance and private sector links.
- **Baalbeck** faces contextual barriers including economic fragility and limited employer participation, requiring cautious planning for WBL implementation.
- **Mount Lebanon** shows a major gap between economic potential and TVET presence. Institutional strengthening and program diversification are urgently needed.
- **Nabatieh** displays moderate readiness, with relevant specializations but limited SAB activity. Employer engagement must be enhanced to enable WBL opportunities.
- **SAB presence** does not guarantee effectiveness. Many boards exist in name but require activation to facilitate meaningful labor market cooperation.
- **Data limitations** restrict full assessment. Further information on infrastructure, instructor capacity, and employer partnerships is essential for strategic WBL planning.

6.1.3.1 Work-Based Learning (WBL) Integration

- **Universally Implemented:** All surveyed schools reported implementing at least one form of Work-Based Learning ranging from short term internships and practical projects to more structured apprenticeship models, developed in collaboration with private sector partners.
- **Simulated Training:** In addition to external placements, several institutions such as the Hotel School (Dekwaneh), Tebnine Technical Institute, and the Orthodox Higher Technical Institute (Akkar) rely heavily on in-house training labs and mock work environments to simulate WBL experiences. These simulated settings are especially vital in areas where access to companies is limited or where industries are hesitant to take on interns.
- **Role of TVET Labs:** Well-equipped TVET laboratories play a crucial role in bridging the gap between classroom learning and workplace readiness.

They allow students to:

- ✓ Acquire hands-on experience before entering real companies.
- ✓ Practice sector-specific tasks using industry-relevant tools and procedures.
- ✓ Build technical confidence and professional behavior in a safe, supervised environment.

Duration of WBL:

- Most schools reported 1–3 months of training.
- A few (e.g., Baalbek, Orthodox Institute) extend over 3 months, showing deeper company engagement.

6.1.3.2 Formal Agreements

• Limited Formalization:

- Many schools lack formal agreements with companies (e.g., Saida, Baalbek, Deir-Aamar).
- Some schools (Tebnine, Halba, Mashghara) reported having [official agreements](#), citing decrees (e.g., 2016/66, 37/2016)¹, showing good legal groundwork but limited to a few institutions.

6.1.3.3 Monitoring and Feedback Mechanisms

- **Supervision:** Most TVET schools actively monitor students during Work-Based Learning (WBL) placements through assigned instructors or focal points who are responsible for regular field visits, on-site supervision, and continuous follow-up with both students and company mentors. These instructors act as liaisons between the school and the enterprise, ensuring that students are attending, engaged, and progressing according to learning objectives.
- **Feedback:** While feedback mechanisms do exist, they are often informal or undocumented. In most cases, communication with companies happens verbally or via phone without structured evaluation tools. However, a few institutes such as Mashghara Technical School and the Institute of Education and Training (IEFT) in Hosh Al-Omara have adopted more formalized feedback processes, including written reports, evaluation forms, or student performance checklists co-signed by company supervisors.

6.1.3.4 Challenges Identified

Key recurring challenges include:

- **Weak Private Sector Commitment:** Companies often show limited commitment to properly supervising and training students during WBL placements.

¹ Annex 5 Agreement adopted by TVET as per DGTVE.

- **Financial Constraints:** Schools highlight lack of resources for WBL, affecting both school infrastructure (e.g., labs and equipment) and students support (transportation costs, unpaid internships).
- **Limited Placement Opportunities:** Many schools, especially in rural areas (e.g., Akkar, Bekaa), report scarcity of training placements, limiting students' practical exposure.
- **Outdated Curricula:** Although not always explicitly stated, the lack of modern equipment and company feedback indirectly reflects the gaps between school curricula and market needs.

6.1.3.5 Proposed Solutions

The schools consistently propose similar solutions, reflecting shared needs:

- **Incentivizing Company Participation:** Offering tax benefits, training subsidies, or formal recognition schemes to encourage more employers to engage in WBL.
- **Curriculum Modernization and Equipment Investment:** Updating outdated training content and equipping schools, particularly in specializations like mechatronics, automation, and hospitality, with modern labs and machinery.
- **Formalization and Quality Monitoring:** Introducing formal agreements between schools and companies and strengthening follow-up and monitoring mechanisms to ensure training quality and accountability.
- **Student Support Measures:** Providing transportation allowances and pre-placement preparatory training to help students better adapt to workplace expectations.
- **Awareness and Outreach Campaigns:** Promoting TVET as a viable and attractive pathway, especially among underrepresented groups, with a focus on increasing gender inclusion.

6.2 Summary of Stakeholder Consultations: Key Conclusions

6.2.1 Development Organizations¹ (UNICEF, ILO, GIZ)

- **Significant contributions to TVET reform:** UNICEF, ILO, and GIZ have supported curriculum modernization, CBT, and provision of digital infrastructure. UNICEF deployed solar systems, while UNICEF and GIZ distributed digital tools to improve institutional resilience in underserved areas.
- **Persistent systemic challenges:** All interviewed actors agreed Lebanon's 190+ TVET curricula remain outdated and poorly aligned with labor market needs, with limited practical training due to infrastructure and coordination gaps.

¹ Annex 7 Meeting with UNICEF, Annex 7 Meeting with ILO.

- **Scaling up WBL partnerships:** ILO and UNICEF stressed the need for deeper public-private partnerships, stronger monitoring tools, and employer incentives to sustain donor-supported WBL initiatives.
- **Monitoring, evaluation, and inclusion:** ILO¹ emphasized adopting international M&E frameworks adapted to Lebanon's context, while UNICEF and ILO called for inclusive WBL practices to address gender and social equity gaps.

6.2.2 Private Sector Actors² (ALI, CCIAZ, SMEs)

- **Limited private sector involvement:** SMEs lack awareness, incentives, and confidence in the current WBL system, while Association of Lebanese Industrialists (ALI) reported few structured partnerships with TVET institutions.
- **Curriculum and equipment gaps:** ALI and CCIAZ highlighted outdated curricula and insufficient training equipment, especially in technical fields like automation, robotics, and Artificial Intelligence (AI).
- **Need for incentives and recognition:** Private sector representatives proposed tax incentives, official recognition systems, and sector-specific pilot programs to encourage WBL participation.
- **Low female participation in technical fields:** Stakeholders stressed the importance of awareness campaigns and inclusive models to attract women to non-traditional technical careers.

6.2.3 Strategic Implications for national TVET authorities and stakeholders

- Modernize curricula and infrastructure in collaboration with employers.
- Institutionalize WBL mechanisms, including incentives, agreements, and certifications.
- Strengthen coordination among ministries, donors, and industry partners.
- Ensure inclusive access for vulnerable youth, especially women and displaced populations.

Ensuring these elements are embedded in national strategies and institutional practices is essential to sustaining donors' impact beyond the project's lifetime and positioning WBL as a permanent pillar of Lebanon's TVET reform.

¹ ILO. (2020). Skills development and the future of work: DACUM methodology applications in Lebanon. International Labor Organization.

² Annex 8 Meeting with ALI.

7 Comparative Analysis, Key Lessons, and Recommendations: Benchmarking Lebanon's Work-Based Learning (WBL) System

Work-Based Learning (WBL) is an essential component of vocational education and workforce development, integrating theoretical instruction with hands-on experience in real work environments. This analysis compares Lebanon's WBL system with those of Jordan, Egypt, and globally recognized models such as Belgium, Germany and Denmark.

Lebanon's WBL system is primarily driven by vocational and technical education (VTE) institutions, industry partnerships, and donor-funded initiatives. The system faces challenges including insufficient private sector engagement, outdated curricula, and limited apprenticeship opportunities. However, recent initiatives by international organizations aim to strengthen employer involvement and improve skills alignment with market needs.

7.1 Comparative Analysis

Criteria	Belgium	Germany	Denmark	Iraq	Jordan	Egypt	Lebanon
Policy Framework	Regionalized system with strong national policies (Flemish, Walloon, German-speaking regions); aligned with EU standards	Dual VET system with structured policy and industry integration	Strong national framework integrating WBL with lifelong learning	Fragmented; limited national WBL policies and weak regulatory oversight	National E-TVET Strategy supports WBL	Strong governmental support through TVET strategy	Fragmented; limited national strategy for WBL
Industry Collaboration	Strong collaboration between industries and education providers; sectoral committees coordinate training content	Strong employer partnerships, industry co-financing, and chambers of commerce integration	Extensive employer-driven system with structured apprenticeships	Very limited industry collaboration; small role of private sector	Increasing private sector involvement; strong role of Chambers of Commerce	Public-private partnerships growing but limited SME engagement	Weak employer engagement, primarily donor-driven projects

Criteria	Belgium	Germany	Denmark	Iraq	Jordan	Egypt	Lebanon
Apprenticeship Model	Well-established dual learning (alternance) system; apprenticeships combine part-time work and study, especially in Flanders	Mandatory dual education system with school-industry integration	Mandatory WBL in all vocational programs	Mostly informal apprenticeships without national standards	Dual training system expanding with international support	Public training centers provide limited hands-on apprenticeships	Informal apprenticeships; few structured programs
Curriculum Alignment	Curricula co-developed with industry; aligned with European Qualifications Framework (EQF); regularly updated	Industry co-designed curriculum ensures market relevance	Continuous curriculum adaptation in collaboration with industry	Outdated curricula; weak linkage with market needs	Aligned with labor market needs but implementation challenges	Gradual alignment with employer requirements	Outdated curricula; limited industry input
Funding and Sustainability	Publicly funded with employer contributions; EU support for modernization; apprenticeships co-financed by employers and regional funds	Industry-funded and state-supported	State-funded with tax incentives for companies	Mostly state-funded; limited private sector contribution	Mixed public-private funding with government support	State-funded with international assistance	Heavily dependent on donor funding
Quality Assurance & Certification	National qualification frameworks per region; EQF alignment; quality assured by external validation bodies	Highly structured certification with employer recognition	Strong national quality assurance system	Weak quality assurance; no robust certification framework	Developing NQF	NQF in place, but enforcement challenges	Weak accreditation and monitoring mechanisms

7.1.1 Key Comparative Insights on WBL Systems

7.1.1.1 Policy Frameworks

- **European models** (Belgium, Germany, and Denmark) have robust national or regional frameworks strongly aligned with EU standards and lifelong learning goals.
- **Middle Eastern countries** (Iraq, Lebanon) show fragmented policy environments with limited national WBL strategies.
- **Jordan and Egypt** demonstrate progress with national TVET strategies supporting WBL but face implementation or capacity challenges.

7.1.1.2 Industry Collaboration

- **Germany and Denmark** lead with deep integration of employers through co-financing and structured apprenticeships.
- **Belgium** shows sectoral collaboration via regional committees.
- **Lebanon and Iraq** suffer from weak employer involvement, relying mostly on donor-funded projects or informal relationships.
- **Jordan and Egypt** are improving through chamber involvement and PPPs but struggle with SME inclusion.

7.1.1.3 Apprenticeship Models

- **Mandatory and structured dual systems** dominate in Germany and Denmark, ensuring quality and integration.
- **Belgium** supports a dual learning model, particularly in Flanders.
- **Iraq and Lebanon** rely on informal apprenticeships with no national standards, while **Jordan** is expanding dual training models.
- **Egypt** offers some public training with hands-on elements but lacks widespread structured programs.

7.1.1.4 Curriculum Alignment

- **European countries** co-develop and regularly update curricula with industry to ensure labor market alignment.
- **Jordan and Egypt** are aligning curricula but still face challenges in implementation.
- **Lebanon, Iraq** have outdated curricula with minimal industry input, limiting relevance and graduate employability.

7.1.1.5 Funding and Sustainability

- **Germany, Belgium, and Denmark** use public-private co-financing, often supported by EU funds or tax incentives.
- **Middle Eastern systems** are more state-funded or donor-dependent, especially in **Lebanon**, which lacks sustainable financing.
- **Jordan and Egypt** show progress toward mixed funding but need stronger private sector contributions.

7.1.1.6 Quality Assurance & Certification

- **European systems** have strong NQF aligned with the European Qualifications Framework (EQF) and validated externally.
- **Jordan and Egypt** are developing or have NQFs but face enforcement challenges.
- **Lebanon, Iraq** have weak QA systems with no national certification standards or reliable accreditation mechanisms.

These insights can help identifying implication for Lebanon to improve quality assurance and certification in WBL. QuA-VET can support the development of a NQF, introduce standardized and industry-endorsed certification models, and establish external quality assurance mechanisms. It should also pilot modular certification in key sectors, train instructors on competency-based assessment, and create a digital system to track and validate student credentials. These actions will enhance the credibility, consistency, and employability of TVET graduates in Lebanon.

7.2 Roadmap for Strengthening Lebanon's WBL System: Key Recommendations, Instruments & Tools

Lebanon is well positioned to transition from fragmented pilot initiatives to a sustainable, inclusive, and labor market-driven (WB) system. The following roadmap builds on existing efforts and donor-supported initiatives (e.g. GIZ, UNICEF, ILO, IECD), incorporating successful models from Belgium, Germany, and Denmark, while adapting to Lebanon's institutional and economic realities.

7.2.1 Recommendation 1: Adopt a Regionalized Approach to WBL Governance

Belgium's model shows that decentralizing TVET and Work-Based Learning (WBL) governance to regions increases responsiveness to local labor market needs facilitating tailored training programs, and enhancing employer participation (European Commission, 2020)¹

Lebanon's Context: Currently, no formal regional governance structure exists for TVET, limiting the system's ability to address diverse regional economic conditions and labor demands. However, promising initiatives by the CCIAZ and Chamber of Commerce, Industry, and Agriculture in Tripoli (CCIAT) have successfully conducted regional labor needs assessments and coordinated employer outreach, indicating potential for scaling regional coordination.

¹ European Commission. (2020). TVET in the EU Neighborhood Region: Comparative Review. Brussels: Directorate-General for International Partnerships.

7.2.1.1 Instruments to be developed

- **Regional Skills Councils** in pilot areas like Bekaa and Tripoli to oversee local TVET and WBL coordination, stakeholder engagement, SAB activation at the regional level, and policy adaptation (governance bodies)
- **Regional WBL** Develop formalized WBL policies tailored to regional labor market needs, adapted from the national guidelines to provide a clear regulatory basis at the regional level.

7.2.1.2 Tools already used / need expansion

- **Labor Market Mapping Tools** (survey templates, data dashboards); piloted with ILO/UNICEF (community-based surveys); could be scaled regionally to enhance labor market intelligence.
- **Pilot Regional WBL** Formalize and expand existing implementation models, such as Agrofood and solar energy sector projects run by CCIAZ to serve as best practices within a regional governance framework.
- **SABs** at regional level should be empowered to advise and monitor regional WBL implementation.

7.2.2 Recommendation 2: Develop a Comprehensive National WBL Strategy

Germany and Denmark maintain unified strategies, underpinned by national legal frameworks and operational tools that ensure consistent implementation and quality assurance (OECD, 2019)¹

Lebanon's Context: The NSF provided a vision (2018–2022) but lacked operational clarity. Recent projects (e.g. GTZ² DSME³, GIZ ProVTE, UNICEF) introduced WBL programs. Lebanon does benefit from coordinated policy dialogue and draft frameworks, yet still needs a dedicated, actionable WBL strategy (e.g. legal mandate, implementation guidelines, funding mechanisms) that is institutionalized beyond periodic coordination meetings.

7.2.2.1 Instruments to be Developed or Finalized

- **National WBL Steering Committee:** A multi-stakeholder governance body to oversee strategy development and coordination.

¹ OECD. (2019). Strengthening Apprenticeship Systems in Middle-Income Countries. Paris: Organisation for Economic Co-operation and Development.

² GTZ is the predecessor organization of GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), formed in 2011 when GTZ merged with two other German development organizations.

³ DSME (Dual System in the Middle East), implemented by Federation of Chambers of Commerce, Industry, and Agriculture in Lebanon (FCCIAL) with MEHE and GIZ support, combines school-based training with in-company learning to promote WBL in Lebanon. [FCCIAL, DSME Program](#).

- **Legal Framework & Apprenticeship Law:** Revision or replacement of Decrees 11019 & 1384 to include CBA-based apprenticeship structures, and to provide clear, enforceable regulations supporting WBL programs.
- **National WBL Policy Document:** Expansion of the NSF into a detailed, actionable strategy with defined goals, roles, and timelines with integration of CBT and CBA approaches.

7.2.2.2 Tools to be created

- **WBL Implementation Manual:** A comprehensive guidebook outlining standard operating procedures for schools and companies participating in WBL including CBT-based program delivery and CBA tools.
- **Standard Operating Procedures (SOPs) for apprenticeships:** Clear protocols to ensure consistent quality and legal compliance including checklists for CBA processes.

A national WBL task force comprising MoL, MEHE, ALI, Chambers of Commerce, UNICEF, and GIZ can be established to co-develop these instruments and tools, ensuring alignment and shared ownership.

7.2.3 Recommendation 3: Strengthen Industry Collaboration

Belgium and Germany succeed through active industry involvement in all aspects of WBL from curriculum design to apprenticeship delivery and quality assurance.

Lebanon's Context: Lebanon context: ALI has established sector units, and CCIAZ has worked closely with agrifood companies, but private sector participation in WBL remains fragmented — with active participation in some sectors and regions, while in others it is sporadic and lacks formal structures for coordination and sustainability. (CCIAZ, 2023)

7.2.3.1 Instruments in Progress / To Formalize

- **Sector Skills Councils:** Institutional committees should be officially mandated and linked to SABs to strengthen industry representation and governance in TVET.
- **Public-Private Partnership Frameworks:** Formal agreements developed in GIZ-supported projects require formal adoption to provide a legal and operational basis for collaboration.
- **Employer Incentive Scheme Framework:** including tax benefits for companies hosting apprentices and contributing to CBA evaluations.

7.2.3.2 Tools to be Developed

- **Digital Apprenticeship Matching Portal:** Scalable versions of pilot platforms developed by ILO/UNICEF should be expanded to facilitate employer-student connections efficiently.

- ▶ **Employer Participation Guidelines:** Clear documentation to define roles, expectations, and support for employers involved in WBL including roles in CBT program co-design and CBA implementation.
- ▶ **Recognition Awards Toolkit:** Mechanisms to acknowledge and incentivize exemplary employer practices in apprenticeship and training (including CBT/CBA participation).

Next Steps: Formalizing Sector Skills Councils under a national private sector association with the experience, technical capacity, and institutional mandate to lead employer engagement in TVET reforms (e.g., ALI, Chambers of Commerce, or similar bodies), and developing a prototype matching platform with GIZ/UNICEF technical assistance will be crucial to advancing industry collaboration.

7.2.4 Recommendation 4: Expand & Formalize WBL Program

WBL in Europe is standardized, closely monitored, and backed by robust legal protections, ensuring quality and accountability.

Lebanon's Context:

Although ILO and UNICEF piloted the WBL program in Lebanon, it remains largely unknown, informal, fragmented, and poorly monitored. There are no nationally enforceable standards, and coordination between schools, companies, and government entities.

7.2.4.1 Instruments to be Developed or Piloted

- ▶ **National Work-Based Learning Standards:** A framework outlining minimum requirements for WBL structure, content, duration, and assessment embedding CBT learning outcomes and CBA procedures.
- ▶ **Standardized Legal Contract Templates:** to formalize the rights and obligations of all parties (students, employers, and institutions) involved in WBL.

7.2.4.2 Tools to be created / scaled

- ▶ **WBL Monitoring Tools** Nationally adopted versions of existing pilot tools (e.g., UNICEF's site visit checklists, evaluation forms) to ensure consistent tracking of learning outcomes, assessment (CBA) and workplace conditions.
- ▶ **WBL Handbooks:** Practical guides tailored for students, employers, and school coordinators to clarify processes, expectations, and rights.
- ▶ **Coordinator Training Kits:** Standardized materials to train WBL focal points, SAB members and in-company trainers on CBT/CBA models.

7.2.5 Recommendation 5: Modernize and Align Curricula

In high-performing countries' TVET systems, curricula are regularly updated based on employer input and real-time Labor Market Information (LMI¹), ensuring relevance, adaptability, and employability.

Lebanon's Context: UNICEF is supporting reform of 190 curricula; ILO conducted DACUM-based (Developing A Curriculum) updates for selected trades. (ILO, 2020)² ; UNICEF, 2022)³. However, these initiatives remain project-based and lack institutional continuity within national structures.

7.2.5.1 *Instruments in use and need institutionalization*

- **Occupational Standards Frameworks:** These official benchmarks, developed in collaboration with ILO, are only partially implemented. They need to be expanded across sectors and formally embedded in national curriculum development processes
- **Industry-Education Curriculum Panels:** Governance structures piloted by UNICEF to engage employers in curriculum design need to become formalized as permanent advisory bodies under DGTVE. It is recommended to be institutionalized and connected with **SABs** for regular curriculum review.

7.2.5.2 *Tools to be updated and reused*

- **Curriculum Development Guidelines Templates and methodologies** used by GIZ (ProVTE, 2021)⁴ should be revised and officially adopted into DGTVE's curriculum revision workflows to ensure consistency and sustainability
- **LMI Surveys & Dashboards;** Developed through NEO/ILO projects⁵. These tools must be better integrated into decision-making processes and curriculum reviews, with wider dissemination and user training. CBT content and CBA performance criteria are recommended to be included.

Suggested Next Step: DGTVE, in collaboration with development partners, should lead an effort to **institutionalize curriculum modernization** by anchoring existing tools and frameworks within the national TVET quality system, with clear mandates, timelines, and performance indicators.

7.2.6 Recommendation 6: Ensure Sustainable Funding Mechanisms

¹ LMI refers to data and analysis about: Employment trends; In-demand skills occupations, Wages and working conditions; Unemployment rates; Future labor market needs.

² ILO. (2020). Skills development and the future of work: DACUM methodology applications in Lebanon. International Labour Organization.

³ UNICEF. (2022). Skills Development for Youth in Crisis Contexts: A Review from the Middle East. New York: United Nations Children's Fund.

⁴ GIZ ProVTE (2021). DACUM and curriculum development in the Lebanese TVET sector.

⁵ NEO/ILO Projects: National Employment Office (NEO), a public institution under the Lebanese MoL. It has collaborated with the ILO on several labor market information (LMI) initiatives, including digital dashboards and employer surveys.

Denmark and Germany sustain WBL through co-financing models, including employer–state cost-sharing and legally mandated training levies.

Lebanon's Context: Currently, most TVET and WBL initiatives are driven by donor-funded projects (e.g. UNICEF, GIZ, AFD) with no centralized national mechanism for long-term financing. This threatens continuity and scalability.

7.2.6.1 Instruments to be created

- ▶ **National Training Fund:** A legally established funding body managed under DGTVE to consolidate resources, allocate funding transparently, and coordinate investment in WBL and TVET.
- ▶ **Employer Training Levy Scheme:** A mandatory payroll-based contribution system, already tested in multiple global contexts, that ensures sustained employer participation in financing skills development.
- ▶ **Co-Financing Models** Frameworks Official policy guidelines outlining cost-sharing arrangements, where government subsidizes part of the training/apprenticeship wage and companies contribute financially or in kind.

7.2.6.2 Tools to be developed

- ▶ **Return On Investment (ROI) Evaluation Tools:** Standardized models adapted from (ILO/EU frameworks) to assess the economic and social value of investing in WBL, for government, employers, and society.
- ▶ **Financial Reporting Templates:** Standard templates for donors, employers, and institutions to track WBL-related spending, enhance accountability, and inform public monitoring.

7.2.6.3 Suggested institutional arrangements

Inter-ministerial coordination mechanism: Effective implementation of these funding instruments may require the establishment of an inter-ministerial coordination mechanism involving key actors such as the Ministry of Finance, DGTVE, the MoL, and private sector representatives. Such a body could help ensure policy alignment, financial sustainability, and stakeholder ownership.

7.2.7 Recommendation 7: Quality Assurance and Certification

Strong quality assurance mechanisms are critical to building trust in TVET and WBL systems, ensuring that training outcomes align with labor market demands and employer expectations.

Lebanon's Context: Lebanon has developed a NQF, but it has not yet been implemented. No dedicated body currently oversees the quality of WBL delivery at scale. Quality assurance efforts remain fragmented and project-based

7.2.7.1 Instruments to be activated/ strengthened

- **Independent WBL Quality Assurance Agency:** A formal institution (potentially expanded from the existing DGTVE quality unit) could play a central role in overseeing WBL quality standards.
- **National Qualifications Framework** A formal standard that requires activation through inter-ministerial coordination and donor-supported operationalization.

7.2.7.2 Tools to be developed and piloted

- **External Audit Tools Standardized checklists and templates** for auditing WBL arrangements in schools and companies (some already developed by ILO¹).
- **Employer Feedback Surveys:** While piloted in some regions, these tools are not yet standardized or institutionalized.
- **Digital Tracking Systems:** UNICEF has piloted student monitoring tools, which could inform national efforts to digitize WBL quality monitoring.

7.2.7.3 Suggested strategic implementations

Establish A unified national M&E framework for WBL linked to the NQF and supported by digital tools could enhance transparency, comparability, and evidence-based policymaking.

To summarize the recommendations, Lebanon already holds the building blocks for many of these recommendations, from donor pilot tools to partial national frameworks. The next step is to connect, consolidate, and institutionalize. By scaling existing tools, formalizing roles, and securing funding mechanisms, Lebanon can transition from fragmented pilots to a cohesive, inclusive WBL system aligned with labor market needs and vulnerable youth aspirations.

¹ ILO. (2020). Skills development and the future of work: DACUM methodology applications in Lebanon. International Labour Organization.

8 Annexes

ANNEX 1

Decree No. 11019 (1968): Apprenticeship and Work-Based Learning Regulations

Issued: 19 September 1968

Issued and Approved by the: Council of Ministers of the Lebanese Republic (مجلس الوزراء) (في الجمهورية اللبنانية), upon the proposal of the Minister of Labour and Social Affairs at the time, and in coordination with the Ministry of National Education (now the Ministry of Education and Higher Education).

Organizes training contracts in commercial, industrial, vocational or professional sectors, which do not cover all aspects related to apprenticeship, but provide some rules for work-based learning in companies including: duration, qualifications, work experience, workplace conditions, and training termination cases

Key Provisions Summary

Article Title / Subject	Key Provisions
1 Contract	Contract must be established in writing specifying profession, duration, remuneration, and place of training.
2 Contract Formalization	Written contracts are mandatory and must be registered with competent authorities. Contracts should include personal data, guardian consent (if applicable), and training curricula.
3 Age & Minor Protection	Minimum apprenticeship age is 15; minors (<18) require written guardian consent. Employment under age 12 is prohibited.
4 Working Conditions Safety	Employers must ensure safe and healthy working conditions, & free from harassment and occupational risks.
5 Contract Termination	Contracts may be terminated by mutual consent or in cases of breach of obligations by either party.
6 Employer Obligations	Employers must assign qualified trainers (minimum 5 years' experience) and have no criminal convictions for serious offenses.
7 Trainee Rights	Trainees are entitled to safe work environments, health coverage as per labor law, and freedom to form associations.
8 Employer Liability	Employers are liable for work-related injuries and must provide insurance coverage for workplace accidents.

ANNEX 2

Decree No. 1384 (1999): Organization of DGTVE and the Dual System

Issued: 15 December 1999

Issued and approved by the Council of Ministers of the Lebanese Republic (مجلس الوزراء) (في الجمهورية اللبنانية)، upon the proposal of the Minister of Education and Higher Education (وزارة التربية والتعليم العالي).

Key Provisions Summary

Article Title / Subject	Key Provisions
1 Establishment of DGTVE	Establishes the Directorate General for Technical and Vocational Education (DGTVE) under the Ministry of Education and Higher Education (MEHE).
2 Mandate & Scope	DGTVE is responsible for overseeing TVET institutions, developing and updating curricula, issuing diplomas and certificates, supervising private institutes, and implementing the Dual System.
3 Dual System Implementation	DGTVE coordinates school-company partnerships, regulates dual training arrangements, and oversees certification processes based on combined school and workplace training.
4 Institutional Roles	Clarifies the responsibilities of school directors, company trainers, and DGTVE regional offices in delivering and supervising WBL programs.
5 Monitoring & Quality Assurance	DGTVE ensures compliance with regulations and monitors the quality of both school-based and company-based training activities.
6 Licensing & Accreditation	DGTVE has the authority to license private training providers and approve new specialties and dual training agreements to ensure legal compliance.

ANNEX 3

Detailed Case Boxes on WBL Programs in Lebanon

Case Box 1: ILO Work-Based Learning Pilots (2023–2024) - Scope: Career guidance, soft and technical skills training, in-company placements - **Geography:** Bekaa, South, North Lebanon - **Target Groups:** Vulnerable Lebanese youth and Syrian refugees - **Results:** Over 200 youth completed dual training, with 40% entering employment or internships - **Contribution to QuA-VET:** Supports blended models, employer engagement, and post-training monitoring.

Case Box 2: ILO–UNICEF TVET Support Programme (2017–2023) - Focus: Reforming the TVET system and modernizing teaching tools - **Activities:** - Developed WBL manuals - Supported national EMIS and labor market assessments - Introduced competency-based curricula and school-industry linkages - **Impact:** Piloted in over 30 schools; groundwork for scalable WBL frameworks.

Case Box 3: SPARK STEP Program (Lebanon & Jordan – 2023)- Countries: Lebanon and Jordan - **Focus:** Entrepreneurship and employability training for youth - **Components:** - Business incubation - Digital skills training - WBL placements and startup support - **Outcome:** Trained 500+ youth, launched 60+ startups.

Case Box 4: Caritas and AVSI WBL Projects (2022-2024) - Geography: Tripoli, Akkar, and Mount Lebanon - **Target:** NEETs, women, and vulnerable youth - **Methodology:** - Short-term technical courses (e.g., mechanics, tailoring, hospitality) - Strong involvement of local SMEs and employers - **Results:** 65% of trainees employed or self-employed post-program - **Good Practice:** Community-based training linked to local economic demand.

Case Box 5: Houkouki App and Rights Awareness Campaign (2021) - Developer: ILO and local partners - **Objective:** Educate apprentices and trainees on their labor rights - **Features:** - Interactive content and quizzes - Reporting and feedback mechanisms - **Use in WBL:** Incorporated into training orientation across several pilot programs.

ANNEX 4

TVET COUNTRY PROFILE- UNEVOC UNESCO									
Last Partial Update		Jan-24	Oct-24	Aug-24	May-24	May-24	Aug-24	Feb-24	
Key Statistics	Description	BELGIUM	GERMANY	DENMARK	IRAQ	JORDAN	EGYPT	LEBANON	
Vocational Education	Enrolment in Vocational programmes, secondary level	40%	18.30%	21.90%	3.50%	3%	21.70%	14.50%	
	Of Which female (%)	51%	35.90%	42.30%	12%	39.70%	41%	41%	
SDG4	Participation in education and training (%), all ages	19%	15.10%	27.90%	17.90%	16.90%	16.60%	13.40%	
	Participation of Youth (15-24) in education	74%	68.50%	73.70%	48.20%	54.90%	57.10%	49.90%	
Educational Institutions	Technological Universities and TVET Institutions Public and Private	306	1469	5082	377	262	3069	566	
General Education	Means Years of schooling, male	12.4	14.5	12.8	8	10.9	9.1	9.1	
	Means Years of schooling, female	12.3	14	13.2	5.4	9.7	9	13.1	
Education Finance	Government expenditure on education US\$(millions)	38,191	233,388	28,398	2,226	1,538	6,123	1,141	
	Government expenditure on TVET, us\$ (milliona) education US\$(millions)	5,986	21,943	2,204					
Socio-economic	GDP (US\$) billion	645	4,526	407	251	51	396	21	
	GDP growth (annual%)	1,4%	(-)0.3%	1.90%	(-)2.9%	2.60%	3.80%	(-)0.6	
Labour Market	Unemployment (%)	5.50%	3.00%	5.10%	15.50%	17.90%	7.30%	11.60%	
	Youth Unemployment (%)	16.10%	6%	12%	32.20%	40.80%	19%	23.70%	
Literacy and Numeracy	Youth Literacy Rate (% ages 15-24)				94%	99%	92.20%	97%	
	Numeracy rate (% all ages)	85.90%	81.30%	85.70%					
Demography	Total Population (thousands)	11,671	83,313	5,897	44,996	11,316	111,847	5,426	
	Youth (ages 15-24, thousands)	1,330	8,215	713	8,828	2,085	19,065	901	

ANNEX 5

<p>– المطلب إلى الأستانة المكلفين بالإشراف على التدريب التوقيع على استمرارات التدريب التي تتضمن أسماء الطلاب المتدربين وتاريخ حضورهم وساعة بدء التدريب وانتهائه يومياً وأسم الاستاذ المدرب وممثل الفريق الثاني.</p> <p>المادة الثالثة: يتوiki الفريق الثاني ما يلي:</p> <ul style="list-style-type: none"> – تسهيل إنجاز الطلاب المتدربين تدريبهم. – تسهيل مرافقة الأستانة للطلاب المتدربين. – التوقيع على استمرارات التدريب المذكورة في المادة الثانية أعلاه. (الفريق الثاني الحق بالاحتفاظ بنسخة عن هذه الأسماء). <p>المادة الرابعة: وضع هذا العقد على ثالث نسخ أصلية تحتفظ إدارة المعهد/ المدرسة بواحدة وإدارة المؤسسة التي يجري التدريب فيها أنسنة واحدة على أن توضع النسخة الثالثة المذكورة المادة للتعليم المهني والتقي.</p> <p>في: الفريق الأول الفريق الثاني</p> <p style="text-align: center;"></p>	<p>الجمهورية اللبنانية وزارة التربية والتعليم العالي المديرية العامة للتعليم المهني والتكنولوجي</p> <p>عند إلتئام</p> <p>بين المعهد/ المدرسة ممثلًا مدير المعهد/ المدرسة السيد/ة ورئيس التدروين التعليمية السيد/ة</p> <p> وبين المؤسسة الشركة ممثلًا بالسيد/ة</p> <p>مقدمة العقد: حيث أن المتأهّل التعليمي المعتمدة في المديرية العامة للتعليم المهني والتقي تتضمن أسماء المدربين وتدريبها سنويًا يكتفى القيام بها أستانة الملك والأستانة المكلفين للتدريب بالساعة وتجري خارج المعاهد والمدارس اللفنية الرسمية ، ثم الإلتئام بين الفريقين على ما يلي:</p> <p>المادة الأولى: تتعذر مقدمة العقد جزءاً لا يتجزأ من هذا العقد.</p> <p>المادة الثانية: يتوiki الفريق الأول ما يلي:</p> <ul style="list-style-type: none"> – إلزام الفريق الثاني قبل أسبوع من بدء التدريب جدول بأسماء الطلاب المتدربين والأستانة المكلفين بالإشراف على التدريب وتاريخ التدريب وأوقات التدريب يومياً. <p style="text-align: center;"></p>
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ANNEX 6

School Name	Area	Total Number of Students	Hospitality	Management Information System	SAB
Saada Technical Institute	Akkar	1140	Yes	Yes	No
Halba Technical Institute	Akkar	1100	Yes	Yes	Yes
Douseh Technical Institute	Akkar	970	Yes	Yes	Yes
Qobayat Technical Institute	Akkar	117	Yes	Yes	Yes
Orthodox Higher Technical Institute - Akkar	Akkar	1093		Yes	Yes
Arsal Technical Institute	Baalbeck	585	Yes	Yes	Yes
Baalbek Technical Institute	Baalbeck	1900	Yes	Yes	Yes
Technical Education and Training Institute - Hosh A	Bekaa	236	Yes	Yes	No
Machghara Technical School	Bekaa	74	Yes	Yes	No
BedNot Availableyel Technical Institute (Beqaa)	Bekaa	945		Yes	Yes
Hotel School (Dekwaneh)	Mount Lebanon	450	Yes		No
Tebnine Technical Institute	Nabatieh	408	Yes	Yes	No
Nabatiyeh Technical Institute	Nabatieh	1260	Yes	Yes	Yes
Hospitality Institute of Tripoli	North	149	Yes		No
Mar Antonios Official Technical Institute	North	226	Yes		No
Deir Ammar Official Technical Institute (North)	North	1470		Yes	No
Saida Technical Institute	South	642	Yes	Yes	Yes
Total	17 TVET	12765	13	14	9

ANNEX 7

Meeting with UNICEF

UNICEF's Role and Challenges in TVET – Summary of Stakeholder Meeting

On **March 6, 2025**, a multi-stakeholder meeting was conducted via Microsoft Teams to discuss UNICEF's role, achievements, and challenges in Lebanon's TVET sector. Participants included representatives from UNICEF, GIZ, and CCIAZ.

Key Highlights:

- **UNICEF Initiatives:** UNICEF plays a pivotal role in upgrading TVET curricula, developing Career Pathway Training (CPT) guidelines, digitizing learning tools, and supporting dropout re-engagement programs.
- **Challenges:** Major challenges include outdated curricula (190 curricula needing revision), limited practical training opportunities, and infrastructure gaps, especially in digital connectivity.
- **Infrastructure & Digitalization:** UNICEF has provided digital tools, internet access (in 10 schools), and rehabilitated damaged schools, notably in southern Lebanon.
- **WBL:** UNICEF supports in-company training and emphasizes public-private partnerships to enhance practical training.
- **Innovations & Successes:** Initiatives such as modular vocational training, solar power installations in 12 schools, and collaboration with multiple ministries have strengthened Lebanon's TVET framework.
- **Ongoing Needs:** Continuous curriculum updates, stronger private sector partnerships, and expanded digital infrastructure remain critical for long-term success.

Conclusion:

The meeting underscored UNICEF's significant contributions to TVET reform while highlighting persistent challenges, particularly the need for updated curricula and integrated work-based learning. Deeper collaboration between UNICEF, GIZ, MEHE, and private sector partners is essential to improve TVET quality and labour market alignment.

ANNEX 8

Meeting with ILO

ILO, GIZ & CCIAZ Collaboration on WBL

On **March 24, 2025**, a multi-stakeholder meeting was conducted via Microsoft Teams to explore collaboration opportunities in enhancing WBL frameworks in Lebanon. Participants included representatives from ILO, GIZ, and CCIAZ.

Key Highlights:

- **ILO Tools & Frameworks:** ILO offers a range of WBL resources, including skills profiling, training needs assessments, CBT methodologies, and quality apprenticeship frameworks, adaptable for Lebanon.
- **WBL Scope:** Defined as apprenticeships, internships, and on-the-job training, with apprenticeships highlighted as paid, formal arrangements lasting at least six months.
- **Collaboration Focus:** Strong alignment identified between ILO, GIZ, and CCIAZ in supporting agriculture, food security, green/digital jobs, and vulnerable groups, especially displaced populations.
- **Sector Challenges:** Manufacturing sector assessments revealed outdated training programs and funding gaps.
- **Sustainability:** Discussions raised concerns about sustaining WBL post-project; incentives and public–private partnerships are key to long-term success.
- **Monitoring & Evaluation:** Emphasis on adopting tested monitoring models and strengthening collaboration with private sector and foundations.

Conclusion:

Participants reaffirmed their commitment to collaborate on WBL initiatives. ILO expressed readiness to support future planning and emphasized the need for continued dialogue to ensure impactful implementation.

ANNEX 9

Meeting with ALI

Enhancing WBL Training in Lebanon

On **March 26, 2025**, a face-to-face meeting was conducted in Chamber of Commerce, Industry and Agriculture of Beirut and Mount Lebanon (CCIABML) to assess challenges and opportunities in strengthening WBL training, focusing on curriculum reform, SME engagement, inclusion, and sustainable partnerships. Participants included representatives from ALI and CCIAZ.

Key Highlights:

- **WBL Gaps:** Coordination between TVET schools and companies remains limited, with SMEs hesitant to participate due to lack of incentives and awareness.
- **Curriculum Reform:** Current curricula are outdated and lack relevance to industry needs; the integration of mechatronics, automation, Programmable Logic Controller (PLC)¹ programming, robotics, and AI has been emphasized.
- **Tools & Equipment:** TVET schools face critical shortages in modern machinery and learning tools requiring urgent investment.
- **Inclusion:** Low female participation in technical fields; inclusive models and awareness campaigns are needed to boost gender balance.
- **Public–Private Partnerships:** Sustained collaboration between schools and industries is key to aligning education with labor market demands.
- **Monitoring & Evaluation:** The absence of standardized tools to assess WBL outcomes was noted; international frameworks should be adapted.
- **Incentives & Certification:** Proposals included tax benefits, company recognition, and structured certification pathways to link training with employment.

Next Steps:

- Develop a roadmap for curriculum reform and sector-specific pilot projects.
- Institutionalize partnerships through regular task forces.
- Establish innovation hubs and continuous learning programs.
- Launch national campaigns to improve TVET's public image.

Recommendations:

Strengthen SME engagement through incentives, modernize curricula with industry input, train trainers on advanced tools, and ensure inclusive, certified pathways to enhance the quality and attractiveness of TVET in Lebanon.

¹ A Programmable Logic Controller (PLC) is a digital industrial computer used to automate electromechanical processes — such as controlling machinery on factory assembly lines, robotic devices, or lighting systems — based on real-time input/output signals.

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