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LUXEMBOURG AID & DEVELOPMENT

Evaluation of the capacity of VET schools and private sector needs

Prepared for “Skills for sustainable jobs in Kosovo” project

civitta

LUXDEV
Luxembourg Development Agency

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List of Abbreviations

ADA	Austrian Development Agency
AE	Adult Education
AI	Administrative Instruction
AKEREE	Kosovar Association for Renewable Energy and Energy Efficiency
AL	Adult Learning
ALLED	Aligning Education for Employment
ALMM	Active labour market measure
AVETAE	Agency for Vocational Education and Training and Adult Education
AWPK	Association of Wood Processors of Kosovo
BLO	Business Liaison Officer
CBTS	Cloud Based Testing System
CPD	Continuing Professional Development
CNC	Computer Numerical Control
CoC	Centre of Competence
CVETAE	Council of Vocational Education and Training and Adult Education
DACUM	Developing a Curriculum
EA	European Accreditation
EARK	Employment Agency of the Republic of Kosovo
ECVET	European Credit system for Vocational Education and Training
EMIS	Education Management Information System
EQF	European Qualifications Framework
ETF	Education and Training Foundation
EU	European Union
EYE	Enhancing Youth Employment
FEGO	Fostering Employment and Growth Opportunities
FGD	Focus Group Discussions
GDP	Gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ICK	Innovation Centre Kosovo
ICT	Information and communication technology
IT	Information Technology
IVET	Initial vocational education and training
JRC	Joint Research Centre
KCC	Kosova Chamber of Commerce
KEEF	Kosovo Energy Efficiency Fund
KESP	Kosovo Education Strategic Plan
LLL	Lifelong Learning
MCC	Millennium Challenge Corporation
MED	Municipal Education Departments
MES	Ministry of Education and Science
MESTI	Ministry of Education, Science, Technology and Innovation
MFLT	Ministry of Finance, Labour and Transfer
MIET	Ministry of Industry, Entrepreneurship and Trade
MIRECK	Metal Industry and Renewable Energy Cluster of Kosovo
MLSW	Ministry of Labour and Social Welfare
MoU	Memorandum of Understanding
MSLW	Ministry of Labour and Social Welfare
NEET	Not in employment, education and training

NGO	Non-Governmental Organizations
NQA	National Qualifications Authority
NQF	National Qualifications Framework
NQV	National Vocational Qualifications
OEAD	Austria's Agency for Education and Internationalisation
OEGJK	German-Kosovar Business Association
OEK	Kosova Chamber of Commerce
OS	Occupational standards
PePeKo	Association of Fruit and Vegetable Processors of Kosovo
PRL	Recognition of prior learning
R&D	Research and Development
RAE	Roma, Ashkali, and Egyptian
RCC	Regional Cooperation Council
RPL	Recognition of Prior Learning
SELFIE	Self-reflection on Effective Learning by Fostering
SHPDK	The Association of Wood Processors of Kosovo
SME	Small Medium Enterprise
STEAM	Science, technology, engineering, arts and mathematics
STEM	Science, technology, engineering and math
STIKK	Kosovo Association of Information and Communication Technology
TAK	Tax Administration of Kosovo
TV	Television
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
VET	Vocational Education and Training
VTC	Vocational Training Centre
WBL	Work Based Learning

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Evaluation of the capacity of VET schools and private sector needs

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1. Executive Summary

This study evaluates the capacities of Vocational Education and Training schools and private sector, including training providers in Kosovo, with a specific focus on the expansion and improvement of Dual VET programmes. The study targets priority sectors, including Information and Communication Technology, Renewable Energy/Energy Efficiency, Agro-Processing, and Wood Processing. It aims to identify gaps, challenges, and opportunities for better alignment between VET offerings and labour market demands, while emphasizing inclusivity, particularly for women, and sustainability in the VET system.

The study employed a mixed-method approach, combining desk research, stakeholder consultations, focus group discussions, surveys, and semi-structured interviews. Data collection involved a wide range of stakeholders, including government agencies, VET institutions, private companies, and industry experts. The desk review incorporated labour market trends, studies focusing on skill gap, and sector-specific analyses to provide a comprehensive understanding of current capacities and future need

1.1. Key findings

1. **Capacity disparities:** Urban VET schools are generally better equipped than their rural counterparts, with significant gaps in infrastructure, curricula, and staff capacity. In priority sectors, such as RE/EE and Wood Processing, training opportunities remain limited. For RE/EE, only 24 schools across 22 municipalities offer relevant profiles, with a total enrolment of 3,321 students in 2023. However, female participation in these programs is notably low at just 3 %. For Wood processing, only five public VET Schools across four municipalities offer training, with a total of 198 students enrolled, representing a small fraction of the overall VET population.
2. **Limited private sector collaboration:** While successful models like Cacttus Education in ICT exist, overall private sector involvement in Dual VET remains low due to insufficient incentives and logistical challenges. Accreditation gaps among private training providers further compound the issue.
3. **Gender disparities:** Female participation is significantly lower in technical fields, such as Mechatronics (22.5%) and RE/EE profiles (3%), due to societal barriers and limited support systems. In ICT, some notable variations in certification outcomes highlight gender differences. For example, in Ferizaj's ICT program, male participants had the lowest graduation rate, with only 12.5 % achieving certification. Conversely, female participants in the same program demonstrated an 87.5 % graduation rate, indicating a clear contrast in outcomes between genders. Despite growth in ICT profiles offered in VET institutions data from 2023 on electrical profiles in VTCs reflects a significant gender gap: out of 158 registered candidates, 151 were male, and only 7 were female
4. **Labour market mismatches:** Skill gaps persist in high-demand roles, including software developers, renewable energy technicians, and Computer Numerical Control (CNC) operators, in dicating the need for curriculum modernization and enhanced work-based learning opportunities

1.2. Quick Wins and Strategic Recommendations

1.2.1. Quick Wins

- **Enhance VET-private sector collaboration:** Introduce financial incentives, establish liaison officers within VET schools, and promote peer-to-peer learning platforms to replicate best practices.
- **Strengthen gender inclusion:** Implement scholarships, mentorship programmes, and community campaigns to encourage women to pursue technical profiles.
- **Private training providers:** Support to private training providers to prioritize achieving accreditation from the National Qualification Authority to ensure their programs meet standardized,high-quality benchmarks and gain wider recognition. To remain relevant and responsive to labour market demands, these providers should also regularly update their curricula, focusing on priority sectors like ICT,RE/EE and Wood Processing.

Aligning training offerings with industry needs, will enhance employability outcomes for graduates and address critical skill gaps in Kosovo's evolving economy.

1.2.2. Strategic Recommendations

- **Modernize curricula:** Regularly update curricula to align with emerging industry needs, such as AI, cybersecurity, and green energy technologies, with active private sector involvement.
- **Build pedagogical capacity:** Invest in train-the-trainer programmes and sector-specific teacher development to enhance the quality of instruction.
- **Expand Peer-to-Peer learning:** Establish platforms for collaboration among VET schools, private companies, and international counterparts to exchange best practices and address challenges.
- **Operationalize ICT and RE/EE centres:** Develop inclusive governance models, ensure equitable access for rural students and women, and integrate sustainability principles into all programmes.

These recommendations aim to create a more inclusive, responsive, and future-ready VET system, aligning with Kosovo's labour market needs and national priorities for green and digital transitions.

2. Introduction

2.1. Background and context

Vocational Education and Training plays a fundamental role in Kosovo's economic and social development, equipping young people with the skills needed to meet the demands of an evolving labour market. The academic year 2023/24 highlights the significance of VET, with over 53% of upper-secondary students (34,006 out of 63,029) enrolled in VET programmes. Notably, 42% of these students are girls[1], yet only 22.5% of girls pursue technical profiles[2], highlighting ongoing gender disparities. Moreover, marginalized groups, such as individuals with disabilities, women, and ethnic minorities, including Roma and Egyptians, continue to face barriers in accessing VET and employment opportunities, as outlined in the Torino Process Review [3].

The Skills for sustainable jobs in Kosovo project seeks to address these challenges by enhancing Kosovo's education and training system, with a focus on expanding Dual VET programmes. Dual VET, which integrates classroom instruction with work-based experience, presents a critical opportunity to align education with the needs of priority sectors such as ICT, renewable energy, energy efficiency, food processing, and wood processing.

This baseline study, conducted by Civitta, is central to these efforts, providing a comprehensive evaluation of the capacity and readiness of VET schools, training centres, and private companies to support and expand Dual VET programmes. It also identifies actionable recommendations to advance the quality and inclusivity of VET in Kosovo, particularly in the context of gender equality, sustainability, and the green agenda.

2.2. Purpose of evaluation

The study serves as a foundation for achieving Result 1 of the Skills for sustainable jobs in Kosovo project: improving the quality and relevance of VET to meet labour market demands. By analysing current challenges, gaps, and opportunities, the study provides critical insights into the readiness of VET schools and private companies to implement Dual VET programmes. Additionally, it contributes to the broader project results by offering recommendations to address gender disparities, align VET training profiles with labour market needs, and foster sustainable practices in priority sectors. The diagram below shows how methodology has supported the implementation of the assignment

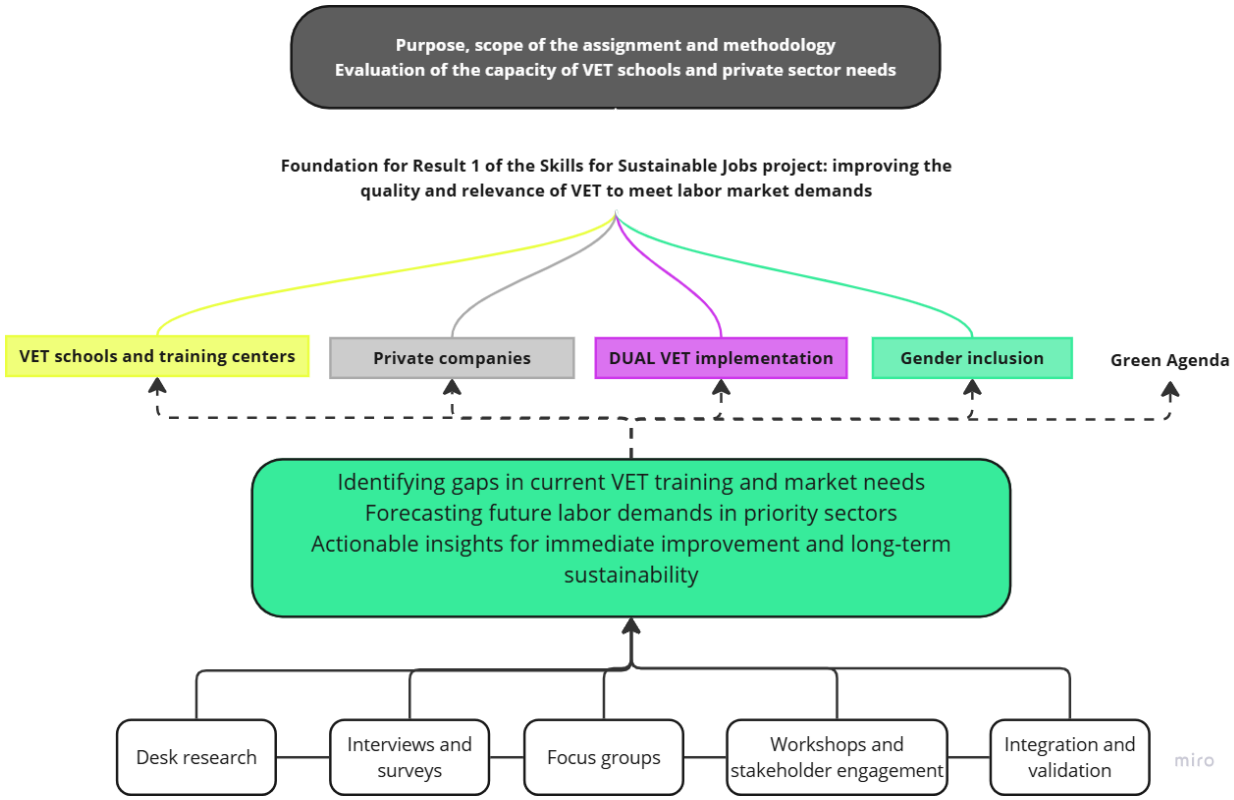

Figure 1. Capacity evaluation of VET schools and training centre

2.3. Scope of the Assignment

This evaluation covers several key areas:

1. VET schools and training centres: Assessing their capacity, infrastructure, and readiness to implement and expand Dual VET programmes, with a focus on aligning training with labour market demands.
2. Private companies: Identifying companies with in-house training centres and analysing their cooperation with VET institutions, emphasizing the quality of work-based learning opportunities.
3. Dual VET implementation: Evaluating partnerships between VET schools and the private sector to identify gaps and mismatches between labour market needs and offered training profiles.
4. Gender inclusion: Exploring barriers faced by girls and women in accessing and succeeding in VET, particularly in technical and green economy-related sectors.
5. Green agenda: Highlighting workforce demands in renewable energy and energy efficiency sectors, ensuring VET programmes are aligned with sustainable development goals.

Through quantitative and qualitative analysis, the study identifies bottlenecks and mismatches, forecasts future labour market demands, and proposes both quick wins and long-term recommendations. By addressing these areas, the study lays the groundwork for a resilient, inclusive, and sustainable VET system that contributes to Kosovo's economic and social development.

3. Methodology

This study adopted a mixed-method approach, integrating desk research, primary data collection, and stakeholder engagement to comprehensively assess the state of the Vocational Education and Training (VET) sector in Kosovo. The methodology focused on understanding capacities, challenges, and opportunities within five targeted sectors: ICT, Green Energy, Agro Processing, Creative Industries, and Wood Processing.

This section outlines a thorough plan, methodology and approach for assessing Kosovo's private sector readiness to assist the implementation of Dual Vocational Education and Training. The approach that we took was designed with the main purpose of ensuring a comprehensive data gathering, data analysis and reporting.

3.1. Research and design

The research combined qualitative and quantitative methods to capture diverse insights into the VET landscape. This included an evaluation of the capacities and readiness of VET schools, training centres, and private companies for Dual VET programmes; exploration of gender inclusion; and an analysis of alignment between VET profiles and labour market needs. The study ensured alignment with stakeholder priorities through close collaboration with institutions such as LuxDev, MESTI, and Riinvest Institute among others. The study's design integrated complementary primary and secondary research phases, leveraging stakeholder feedback and existing data to ensure valid findings. Regular stakeholder consultations and validation workshops provided iterative feedback, aligning findings with the realities and needs of key actors in the sector.

3.2. Data Collection Methods

3.2.1. Desk Research

The desk research synthesized secondary data, including government strategies, sectoral studies, and reports, as shown in figure 2. The analysis focused on identifying skill demands, particularly in green energy, ICT, and Agro processing.

3.2.2. Surveys and Interviews

Surveys tailored for VET schools, training centres, and private companies were distributed with support from Kosovo economic chambers, Kosovo-German Economic Chamber, business membership organisations (BMO) such as MIRECK, STIKK, Wood Processing Association of Kosova, PePeKo, Organika, etc.to assess readiness for Dual VET programs and alignment with labour market needs. Additionally, semi-structured interviews with 23 key informants captured sector-specific insights. Stakeholders included government representatives, economic chambers, BMOs, VET institutions, and development partners. Questionnaires for interviews and the survey were presented and validated with stakeholders and LuxDev KSV/021 project team.

3.2.3. Focus Group Discussions

Five focus groups were conducted with representatives from: VET schools, training centres, businesses, donors and clusters. The discussions addressed key themes:

- Readiness of VET schools and training centres for expanding Dual VET programmes.

- Best practices in work-based learning.
- Gender inclusion in Dual VET programmes.
- Alignment of VET profiles with labour market needs and future demand forecasts.

Prior to organizing the focus group discussions (FGD)s, Civitta developed and shared the FGD guide with the LuxDev KSV/021 project team.

3.2.4. Workshops and Stakeholder Engagement

An inception workshop with MESTI and stakeholders aligned the study's vision and methodology. A validation workshop with LuxDev and stakeholders at the end of the study confirmed findings and recommendations.

3.3. Data Analysis

The analysis combined quantitative and qualitative techniques:

- **QUANTITATIVE ANALYSIS:** Surveys and secondary data were statistically evaluated to identify trends in VET capacities and skill gaps.
- **QUALITATIVE ANALYSIS:** Focus group discussions, interviews, and desk research insights were thematically coded to highlight sectoral and gender-specific challenges and opportunities.

3.4. Integration and Validation

Findings were synthesized across research phases and validated through iterative workshops and stakeholder feedback. This ensured coherence and alignment with sectoral priorities and informed recommendations for strengthening the VET system in Kosovo.

3.5. Limitations

The study encountered data gaps, particularly on enrolment and green energy-related skills, which were mitigated through consultations and reliance on credible secondary sources.

4. Desk research key findings

The desk research offers a detailed analysis of Kosovo's labour market, focusing on key sectors with significant economic potential. It explores sectoral growth trends, skill demands, and the alignment of vocational training with labour market needs, emphasizing the importance of tailored workforce development strategies. This section provides a summary of key findings from the desk research conducted for this study. A more comprehensive analysis, including detailed sectoral insights, is available in the Desk Research Report.

4.1. Information and Communication Technology (ICT)

The ICT sector in Kosovo has experienced expansion over the past decade, reflecting a global shift toward digital transformation and increasing reliance on technology-driven solutions. The number of active ICT companies in Kosovo has doubled, and the sector has become a vital contributor to both domestic economic development and export revenue. Software development and outsourcing services are among the primary drivers of this growth, with local companies successfully entering international markets.

Despite the sector's rapid expansion, challenges persist, particularly in addressing skill gaps. Employers report a shortage of workers skilled in advanced areas such as software engineering, data analysis, and cybersecurity. Emerging fields like artificial intelligence, cloud computing, and blockchain technologies further highlight the mismatch between industry needs and the skills of the workforce. While higher education institutions in Kosovo continue to produce ICT graduates, their readiness to meet the demands of the labour market remains limited, necessitating stronger alignment between academic curricula and industry expectations.

4.2. Renewable Energy / Energy Efficiency

The renewable energy and energy efficiency sector in Kosovo is gaining momentum, driven by the country’s commitment to sustainable development and carbon emission reduction. Solar, wind, and hydropower have emerged as promising areas of investment, aligning with global trends toward green energy solutions. The sector offers significant potential for creating green jobs and diversifying Kosovo’s energy sources, contributing to long-term energy security and environmental sustainability.

Despite these opportunities, the sector faces critical challenges in workforce readiness. Technical expertise in renewable energy system design, installation, and maintenance is scarce, hindering the adoption of advanced technologies. Educational and training institutions have yet to prioritize renewable energy profiles, reflecting a need for substantial investment in capacity building and curriculum development. Expanding training opportunities in energy efficiency and renewable energy technologies will be critical in meeting labour market demands and supporting Kosovo’s transition to a greener economy.

4.3. Agro processing

The agro processing sector is a cornerstone of Kosovo’s economy, playing a vital role in employment, rural development, and export opportunities. The sector encompasses crop production, livestock farming, and food processing, with small and medium-sized enterprises (SMEs) at its heart. These enterprises contribute significantly to rural livelihoods, offering employment opportunities that sustain communities and foster economic resilience.

However, skill gaps in sustainable farming practices, food safety standards, and supply chain management limit the sector’s productivity and competitiveness. Existing vocational training programmes in agribusiness remain sparse and lack the capacity to address these challenges effectively. Although efforts to modernize farming techniques and integrate agro-tech are underway, there is a pressing need to enhance the availability and quality of specialized training programmes. Strengthening the alignment between workforce development initiatives and agribusiness sector demands is crucial for sustaining growth and improving global market competitiveness.

4.4. Wood Processing

The wood processing industry is one of Kosovo's leading manufacturing sectors, showcasing consistent growth and export potential. Over the past five years, the number of active companies in the sector has increased by nearly 50%, accompanied by a doubling of employment. This upward trajectory underscores the sector's capacity to contribute significantly to import substitution and economic development. However, enterprises continue to face skills shortages that hinder their ability to meet market demands for high-quality products. Professions such as Furniture Makers, Wood Treaters, and Assemblers are expected to grow by more than 35% over the next three years, emphasizing the need for skills in CNC programming, technical drawing interpretation, and advanced machinery operation. The existing VET system offers limited profiles in this field, with low student enrolment and minimal female participation, reflecting broader challenges in workforce diversity and capacity. Public and private vocational training centres provide some support, yet gaps in practical training and work-based learning programmes persist, necessitating a strategic focus on skill development to sustain the sector's growth.

4.5. Creative Industries

Kosovo's creative industries represent a diverse and fast-growing sector encompassing fields such as film, music, performing arts, crafts, design, and architecture. These industries are integral to fostering cultural identity and economic innovation, with key sub-sectors like performing arts, media, and creative services identified as high-potential growth areas. While the sector shows promise, limited data on the value chain and labour market demand presents a challenge for targeted interventions. Vocational education plays a crucial role in supporting creative industries, with 22 profiles offered in 32 VET schools across Kosovo. The enrolment of over 3,700 students in 2023/24 highlights significant interest in the sector, particularly among female students, who constitute 61.2% of total enrolment. However, gender disparities persist across specific profiles, with fields like Textile and Clothing Design dominated by females, while technical disciplines such as Architecture and Graphic Design are predominantly male. The absence of WBL opportunities further underscores the need for practical training initiatives to enhance job readiness and sectoral development.

4.6. Conclusions

The desk research findings underline the critical need for targeted workforce development strategies across Kosovo's key sectors. Strengthening vocational training, addressing skill gaps, and fostering greater alignment between educational institutions and industry demands are essential to ensure sustainable economic growth and competitiveness in the global market. By investing in sector-specific capacity building and promoting gender diversity, Kosovo can capitalize on its economic potential while fostering an inclusive and resilient labour market. The five sectors studied: ICT, Renewable Energy and Energy Efficiency, Agro processing wood processing, and creative industries, demonstrate unique challenges and opportunities, particularly regarding labour market demand for specific job profiles.

In the ICT sector, the demand for programmers, software developers, IT system administrators, data analysts, and cybersecurity specialists is expected to grow significantly, driven by rapid technological advancements and digitalization. Additionally, emerging roles such as AI specialists, cloud computing experts, and IoT professionals are anticipated to gain prominence in the near future. The agroprocessing sector requires agricultural technicians, food technologists, and agronomists, with an increasing need for experts in organic farming and sustainable practices. The sector also emphasizes the importance of machine operators and greenhouse technicians as mechanization and modern farming techniques expand.

The RE/EE sector presents growing opportunities as Kosovo transitions toward greener practices. Key roles include renewable energy technicians, energy auditors, and solar and wind energy specialists. The need for skilled workers in heating, cooling, and energy efficiency technologies is expected to grow, supported by national and donor-driven initiatives promoting green development.

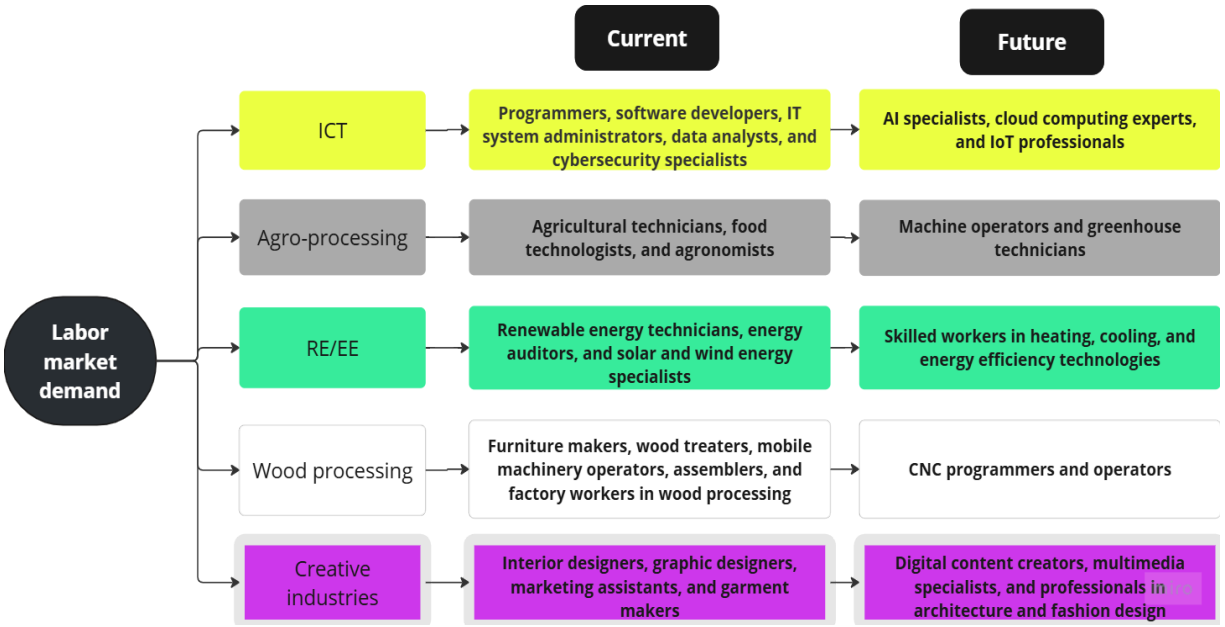

Figure 3. Labour market demand - current and future

The wood processing industry highlights demand for furniture makers, wood treaters, truck drivers, mobile machinery operators, assemblers, and factory workers in wood processing. The sector also expects a significant rise in demand for CNC programmers and operators, reflecting the industry's shift toward technologically advanced production methods.

Finally, the creative industries exhibit strong demand for interior designers, graphic designers, marketing assistants, and garment makers, with future needs likely to expand to digital content creators, multimedia specialists, and professionals in architecture and fashion design. Notably, the gender distribution in these fields suggests opportunities for increasing inclusivity and diversity, particularly in male-dominated technical roles.

Addressing these specific job profiles through targeted training and capacity-building initiatives will be crucial for fostering a workforce that aligns with labour market needs, supports sectoral growth, and promotes economic resilience in Kosovo. For a more detailed exploration of these findings, including additional sectoral analysis and data, please refer to the Desk Research Report.

5. Findings

The findings presented in this section are derived from the comprehensive data collection methods outlined in the methodology. By integrating insights from desk research, surveys, focus group discussions, and semi-structured interviews with a wide range of stakeholders, the study offers a detailed assessment of the VET ecosystem in Kosovo. These findings capture the current capacities, challenges, and opportunities within VET schools, training providers, and private sector partnerships, with a particular focus on priority sectors such as ICT, RE/EE, Agro-Processing, and Wood Processing. The analysis also highlights critical themes, including gender inclusiveness, labour market alignment, and future demand forecasts, providing a solid foundation for actionable recommendations.

5.1. Programme Capacity of VET Schools and Training Providers

The capacity of VET schools and private training providers in Kosovo reveals significant disparities across sectors and regions, affecting their ability to address labour market demands. Priority sectors such as ICT, RE/EE, Agro Processing, and Wood Processing are characterized by varying levels of infrastructure, curricula alignment, and enrollment patterns.

During the 2023/24 academic year, 34,006 upper-secondary students were enrolled in VET schools, representing approximately 53% of the upper-secondary student population (63,029 total). Among these, 42% (14,384 students) were female, but their participation in technical profiles remains disproportionately low. For instance, female enrolment in technical fields such as Mechatronics and Telecommunications is only 22.5%, and in energy-related profiles, it drops further to just 3%.

ICT-related profiles are offered in 30 public VET schools across 23 municipalities, with 17 distinct profiles, including Informatics, Telecommunications, and Interactive Media Design. Informatics is the most popular profile, while specialized fields like IT Systems Technician and Telecommunications have lower but steady enrolment. However, training delivery in ICT suffers from outdated equipment and insufficient digital skills training. For example, students in public VET schools receive only 72 hours of digital competence training annually, which is insufficient to meet industry demands for advanced technical skills.

In the RE/EE sector, only four profiles are available nationally, such as Electrical Installer and Heating and Air Conditioning Installer. These programmes are offered in 25 schools across 22 municipalities, with a total enrolment of 3,321 students in 2023/24.

However, female enrolment remains critically low, with only 83 female students in this sector. The Heating

Advancing Dual VET in Kosovo – The Success of "7 Shtatori" School

"7 Shtatori" School has emerged as a pioneer in the implementation of Dual VET in Kosovo. Starting in the academic year 2022/23, the school introduced three courses across two key VET profiles: Kitchen and Hospitality. This journey began with extensive collaboration between the school and key stakeholders, including the Kosovo Hospitality and Tourism Chamber, MESTI, and other relevant partners. Numerous meetings were held to establish a strong foundation and ensure all parties were aligned, culminating in a formal agreement to launch the program. In its first year, "7 Shtatori" delivered three courses to 50 students, integrating practical and theoretical learning to provide hands-on experience in real-world environments.

The combination of professional practice and classroom instruction enhanced students' technical skills and employability, setting a new standard for vocational education. Building on this success, the school expanded in 2024/25, introducing 11 classes across two profiles—Economics (wholesale/retail) and Hospitality & Kitchen (hospitality assistants and chefs)—increasing student enrollment to around 250, a fivefold growth from the previous year.

The implementation of Dual VET has significantly improved education quality at "7 Shtatori," aligning the curriculum with industry needs and making the school a top choice for students seeking career-focused education. The program also introduced paid professional practice, offering financial support and stronger workforce connections. Through innovation and collaboration, the school has set a benchmark for vocational education in Kosovo, demonstrating the importance of equipping youth with the skills and opportunities needed for success in the job market. This case highlights how targeted initiatives can create lasting impacts for students, schools, and industries.

and Air Conditioning Installer profile is the most popular, with 1,564 male students, accounting for 52% of the total male enrolment in energy-related profiles.

The Wood Processing sector demonstrates limited capacity, with just four profiles offered across five schools in four municipalities. Enrolment in this sector totalled 198 students during the 2023/24 academic year. Significant dropout rates are observed, with the number of students declining substantially from Grade 10 to Grade 12, indicating challenges in programme retention or alignment with student aspirations, and the impact of increasing migration.

Private training providers complement the public system, particularly in ICT and Wood Processing. In ICT, there are 44 private training centres, but only nine are accredited by the National Qualifications Authority, leading to disparities in training quality. Similarly, in Wood Processing, five private centres offer training, but only two are accredited. These gaps in accreditation highlight the need for quality assurance and standardization across private training providers.

Adult VET programmes serve as an important mechanism for adult learning, particularly for job seekers. However, these programmes remain fragmented, and project based. For example, in the ICT sector, 97 individuals enrolled annually in these programmes, with 71 achieving certification. In Wood Processing, public VTCs trained 129 individuals annually, with certification rates ranging from 70% in Gjilan to 91% in Peja. Disparities between urban and rural regions are evident, with urban VET schools generally better equipped and staffed than their rural counterparts. In rural areas, the lack of resources for transportation and monitoring further exacerbates challenges in implementing Dualand WBL programmes, particularly in distant locations. Addressing these inequalities will require targeted investments in infrastructure, modernization of curricula, and expansion of accreditation for private training centres to ensure consistent quality across the system.

The VET system in Kosovo is competency-based, designed to meet labour market demands in sectors such as ICT, renewable energy, energy efficiency, contraction and manufacturing. Training programmes focus on these industries, supported by initiatives such as Kosovo Chamber of Commerce (KCC) offering training for in-company instructors, though limited funding constrains programme expansion. Specialized ICT training in areas like cybersecurity and digital marketing is offered by some organizations, while KCC focuses on soft skills development.

Dual VET and WBL remain in high demand, particularly in fields such as electrical installation and networks. Several VET centres and companies provide sector-specific training, and organizations like OEK work to align workforce development with industry needs. However, many organizations face challenges implementing internships due to limited resources. Vocational training is also available in fields like culinary arts, electrical installations, and business administration, serving a range of sectors.

Kosovo's infrastructure for Dual VET and WBL is still developing. While some VET institutions in urban areas can offer Dual VET, others struggle to secure placements for students in companies. Logistical challenges, including limited transportation, insufficient professional practice teachers, and a lack of business liaison officers (BLOs), hinder implementation. Additionally, limited financial resources restrict investment in essential materials and equipment for practical training. This issue is further exacerbated by the lack of financial autonomy among VET institutions and insufficient information about available funding opportunities from MESTI and Municipal Education Directorates (MED)s, which significantly limits their ability to address these gaps effectively.

Although some VET centres are equipped to deliver Dual and WBL programmes, strict adherence to the legal framework can determine business participation. Offering incentives to companies hosting students, such as grants or tax benefits, could improve engagement. Effective implementation also requires strengthening the pedagogical capacity of VET staff to support practical work.

Regular curriculum updates and revisions, in collaboration with employers, are essential to ensure alignment with labour market needs. Schools and training centres must work closely with industry partners to develop programmes that reflect the skills and knowledge required by employers. Business involvement in curriculum design ensures that students gain market-relevant skills, and that training content remains responsive to rapid technological and sectoral changes.

Stakeholders widely agree that systematic curriculum reviews are crucial to adapt to industry shifts. Dual learning programmes, which combine classroom education with hands-on experience, are seen as a vital tool for bridging skills gaps. For these programmes to succeed, ongoing collaboration among schools, businesses, and other stakeholders is necessary. Establishing sector-specific skills committees with representatives from all relevant areas will further enhance VET programmes. Investing in long-term strategies, upgrading curricula, and strengthening partnerships with industry actors are key to advancing Kosovo's Dual Education system.

5.2. Private Sector Involvement in Dual VET

Private sector engagement in Dual VET programmes is growing but remains inconsistent and sector specific. While notable contributions exist in ICT and Agro Processing, broader private sector involvement across all priority sectors is limited.

Regarding companies' readiness to expand and improve their involvement in Dual VET programmes, 34.7% of respondents reported high levels of readiness, while 20.4% indicated they are ready. Another 34.7% of respondents described themselves as somewhat ready, and 10.2% stated they are not ready, as shown in Figure 4. Additionally, only 34.7% of respondents believe that VET schools and training facilities are fully prepared to support Dual VET programmes. The majority, 34.7%, consider these institutions to be somewhat prepared, highlighting significant opportunities for targeted development and capacity-building initiatives.

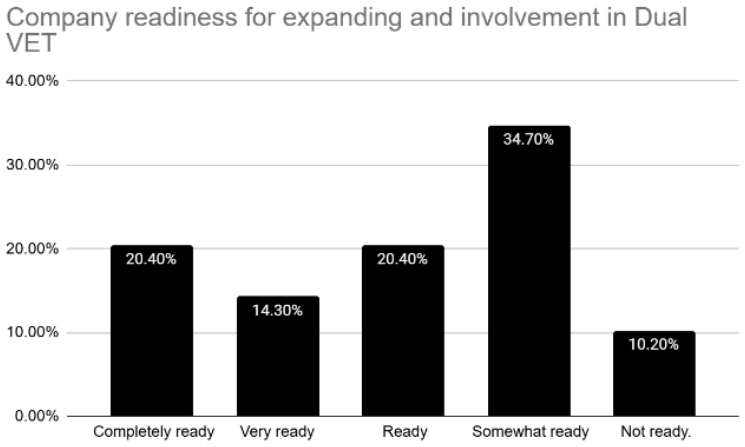

Figure 4. *Company readiness*

Enhancing institutional readiness and planning is critical, as only 20.4% of respondents view VET schools as completely prepared for Dual VET implementation. Future initiatives should prioritize areas of high interest, such as ICT (51%), renewable energy (34.7%), and energy efficiency (32.7%), while also seeking ways to strengthen established sectors like food processing and wood processing. Finally, with 60% of businesses expressing strong interest in continuing participation, shown in figure 5, offering additional incentives and support could further encourage companies to adopt and expand Dual VET programmes.

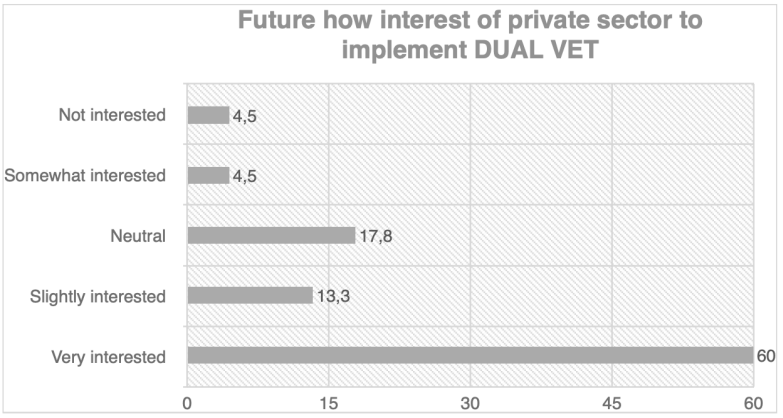

Figure 5. Future interest of companies to implement Dual VET

In the ICT sector, companies like Cacttus Education have developed in-house training centres that successfully address immediate skill needs while providing practical exposure for VET students. This model showcases the potential for collaboration when private entities actively participate in training delivery. Similarly, in Agro Processing, PePeKo has demonstrated how industry-led initiatives can enhance skills development by tailoring training to specific market needs.

5.2.1. Companies with their own internal training centres

Analysis of respondents' inputs regarding infrastructure shows that 67.3% of companies have their own training centres shown in Table 1, while 32.7% do not, portrayed in figure 6. Over 60% of these companies provide various modes of training at their premises, including Dual VET, Work-Based Learning (WBL), on-the-job training, classroom training, blended learning, and online learning.

The majority of businesses surveyed demonstrate a proactive approach to employee development by maintaining their own training centres. Additionally, 67.3% of companies reported having the necessary infrastructure to support Dual VET programmes, such as equipment, tools, and workspaces. However, approximately one third of respondents lack the infrastructure required to implement Dual VET effectively, indicating a need for targeted support to bridge this gap.

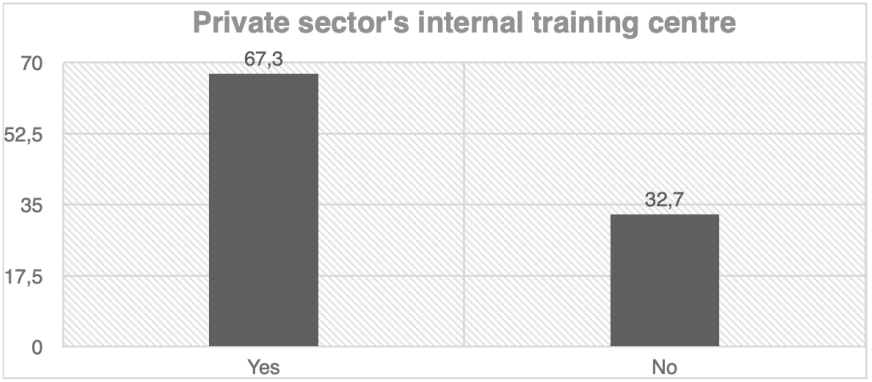

Figure 6. Companies with an internal training centre

No	Business Name	Sector	Region
1	Kompania Kosovare për Distribuim të Energjisë Elektrike	Energy	Kosovo wide
2	Jaha Solar	Energy	Mitrovice
3	KELAG	Energy	Prishtine
4	EcoKs	Energy	Mitrovice
5	EnterKS	Energy	Gjakove
6	Edoni 7	Energy	Ferizaj
7	Smart energy	Energy	Prishtine
8	Kosovo Mining	Energy	Prishtine
9	Solutions Connected	ICT	Prishtine
10	LinkPlus IT	ICT	Prishtine
11	Kutia ShPK	ICT	Prishtinë
12	Digital Education	ICT	Peje
13	KCDE	ICT	Mitrovice
14	ITC	ICT	Gjilan
15	LexusK	ICT	Prishtine
16	Future AI	ICT	Prishtine
17	Unique Contract Furniture LLC	Wood Processing	Ferizaj
18	Elnor furniture	Wood Processing	Gracanice, Prishtine
19	Bini	Wood Processing	Mitrovice
20	Wood Kosova	Wood Processing	Gjakove
21	Agro Shqiponja	Food Processing	Malisheve
22	Fluidi Group LLC	Food Processing	Gjilan
23	ORGANIKA	Food Processing	Prishtina
24	AWESK	ICT & Energy	Prishtine
25	Nexia	ICT & Energy	Prishtine
26	APRK	ICT & Energy	Prishtine
27	Innovation Centre Kosovo	ICT & Energy	Prishtine
28	Deloitte Kosova	ICT & Energy	Prishtine

Table 1. *List of companies with their own training centres*

Despite these successful examples, systemic challenges hinder broader private sector engagement. Smaller enterprises, which dominate Kosovo's economy, often lack the financial and logistical capacity to host work-based learning opportunities. In contrast, larger companies tend to focus on immediate operational needs rather than long-term workforce development. For example, while 25 enterprises collaborated with schools to implement the Cook profile as part of WBL programmes, participation in other technical fields remains scarce.

Accreditation challenges further complicate private sector involvement. Although there are 44 ICT training centres operating in Kosovo, only nine are accredited by the NQA, raising concerns about the consistency and quality of training provided. Similarly, in the renewable energy sector, collaboration is limited to a small number of companies, with only two accredited providers offering structured WBL opportunities.

To enhance private sector participation, the study identifies the need for targeted incentives such as competitive grants, tax breaks, and recognition programmes for companies that invest in Dual VET. These measures could encourage businesses to co-design curricula, host trainees, and develop in-house training capabilities. Additionally, sector-specific interventions, such as advisory boards and structured public-private dialogue platforms, can help align industry expectations with VET capacities. Private sector involvement in Dual VET can be enhanced through the introduction of levies or financial incentives, which would contribute to the system's sustainability. For instance, in Austria, private companies participating in Dual VET receive a public subsidy for each apprentice. This subsidy is structured regressively over the training period: companies receive the equivalent of three months of apprenticeship wages during the first year of training, two months during the second year, and one month during the third and fourth years. Establishing a similar apprenticeship fund in Kosovo could significantly improve the productivity and sustainability of the Dual VET system. Such a fund would cover part of students' wages, serving as a powerful incentive to encourage private sector participation.

5.3. Gaps and Bottlenecks in Cooperation

Implementing Dual and WBL programmes in Kosovo faces several challenges. Adapting curricula to align with labour market demands and covering associated costs such as student wages, health insurance, transportation, and meals are significant obstacles. Many SMEs lack the financial resources and skilled instructors required for effective on-the-job training. Additionally, limited awareness of the benefits of Dual/WBL programmes among students, parents, and businesses restricts broader participation. Collaboration between educational institutions and the private sector is often hindered by legislative and regulatory barriers, such as labour laws and inadequate institutional support. Employers are sometimes reluctant to participate, citing a lack of guarantees that students will remain with their companies long-term, cultural barriers, and concerns over safety, including the provision of protective gear. Furthermore, underdeveloped resources at schools constrain hands-on learning opportunities. Despite these obstacles, stakeholders recognize the importance of Dual/WBL programmes in preparing students for the workforce and remain committed to overcoming these challenges.

A key finding of the study highlights mismatches between VET training profiles and labour market demands, particularly in high-growth sectors like ICT and RE/EE. For example, 74% of ICT companies report difficulties in hiring skilled professionals, with roles such as senior software developers and software architects being particularly challenging to fill. Similarly, the RE/EE sector struggles to recruit trained energy technicians, constrained by the availability of only three nationally recognized occupational standards for these roles. Systemic issues also undermine collaboration between VET schools and private companies.These include limited funding for joint initiatives, fragmented communication channels, and the absence of structured partnership mechanisms. Although many companies express interest in participating in Dual VET, a lack of clear financial incentives and support frameworks has impeded broader engagement.

Addressing these bottlenecks requires a coordinated approach, including:

- **Policy reforms** to streamline partnerships between VET institutions and businesses.
- **Financial incentives** to encourage private sector participation in Dual VET programmes.
- **Investments in modernizing** VET curricula to meet evolving labour market demands.
- **Strengthened collaboration frameworks** to align training offerings with industry needs.

Survey findings reinforce the importance of enhanced partnerships, with 54.5% of respondents advocating for joint industry-school projects and 31.8% emphasizing the need for better coordination. Businesses stress the need for improved cooperation and communication with VET institutions to better align training with industry needs.

Key priorities identified include:

- Developing adaptable, sector-specific training modules.
- Enhancing the competencies of teachers and instructors.
- Upgrading training equipment and facilities, with 63.6% of respondents identifying this as critical for improving VET quality.
- Supporting the development of specialized training modules (59.1%) and fostering partnerships with SMEs (50%).

Flexible, industry-tailored learning content is recommended by 45.5% of respondents, while 36.4% highlight the importance of regular curriculum revisions. Half of the respondents advocate for regular meetings between VET instructors and company representatives to strengthen collaboration. Simplified collaboration agreements and frequent communication between VET institutions and businesses are also seen as essential steps to enhance partnerships and improve the quality of VET provision.

5.4. Gender Inclusiveness

Gender disparities remain a persistent issue in Kosovo's VET sector. While 42% of VET students overall are female, their participation in technical profiles is disproportionately low. For example, female enrolment in technical fields such as Mechatronics and Telecommunications is only 22.5%, and in RE/EE-related fields, female representation is as low as 3%. Progress is noted in some areas, such as ICT programs in Ferizaj, where the graduation rate for women reached 87.5% compared to 12.5% for men. However, these successes remain isolated. In contrast, the Creative Industries show higher female participation in profiles like Garment Making (90%) but much lower representation in technical fields like Graphic Design (40%).

These patterns reflect entrenched cultural norms and gender stereotypes that limit women's participation in traditionally male-dominated sectors. Survey results indicate mixed perceptions about the effectiveness of existing measures to increase female participation in VET. While 45.5% of respondents find current inclusion measures effective, and 27.3% consider them very effective, 59.1% identify specific barriers preventing women from participating in Dual VET programmes as shown in Figure 7. These barriers include cultural expectations (29.4%), lack of information (41.2%), and family obligations (41.2%). Female teachers and instructors are also underrepresented, with 36.4% of institutions reporting fewer than 10% female staff.

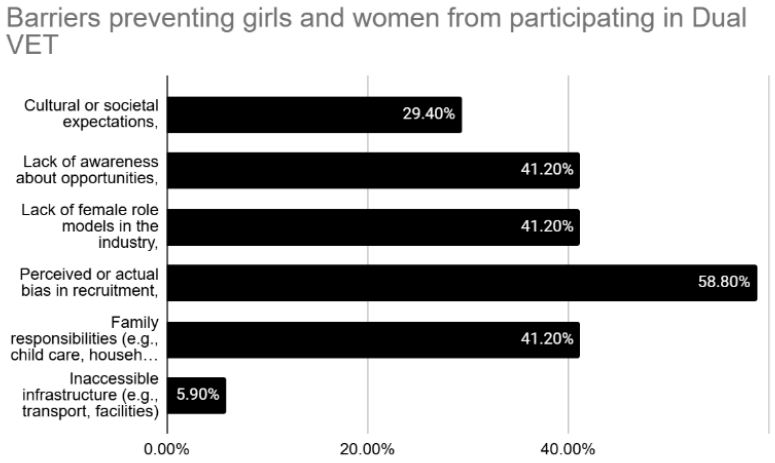

***Figure 7**. Barriers preventing girls and women from participating in Dual VET*

Despite some progress, systemic challenges persist. Although 81.8% of institutions have gender-sensitive infrastructure, gaps remain in offering flexible schedules (55%) and safe transportation options (20%). Half of the institutions surveyed report inclusive workplace policies, while 54.5% provide outreach programmes. To enhance gender inclusion, targeted scholarships, mentorship programmes, and awareness campaigns are critical. Expanding flexible training schedules, addressing family responsibilities through childcare support, and ensuring safe transportation options will improve accessibility for women. Increasing female representation in teaching and leadership roles within VET institutions, coupled with gender-responsive policies, will also contribute to a more inclusive system. By challenging cultural norms and biases and prioritizing structural and policy reforms, Kosovo can foster greater female participation in Dual VET programmes, particularly in technical and high-growth sectors.

5.5. Future Demand Forecast

Anticipated labour market trends highlight significant demand for skilled professionals across Kosovo's priority sectors, particularly ICT and RE/EE. In the ICT sector, software developers, AI specialists, and cybersecurity experts are expected to remain in high demand. The Kosovo ICT Value Chain Study found that software developers account for 11% of the most sought-after roles, followed by marketing specialists and software engineers (8%). In the RE/EE sector, the transition to a greener economy is expected to drive demand for specialized roles such as renewable energy technicians, energy efficiency experts, and project managers in sustainable technologies.

However, the availability of training programmes in these areas remains limited. Nationally, there are only three occupational standards for RE/EE-related profiles, and enrolment in these programs is notably low. The study reveals specific job profiles needed within the RE/EE sectors, shown in figure 8. Solar energy technicians (18.2%) and energy efficiency jobs (27.3%) are identified as top priorities by VET institutions, while wind turbine technicians (13.6%), biomass technicians (9.1%), and energy management specialists (9.1%) also show moderate demand. However, 57.5% of respondents reported no specific demand for the identified roles, underscoring a gap in industry awareness or preparation. To address this, raising awareness of career opportunities in RE/EE, alongside curriculum updates, is essential.

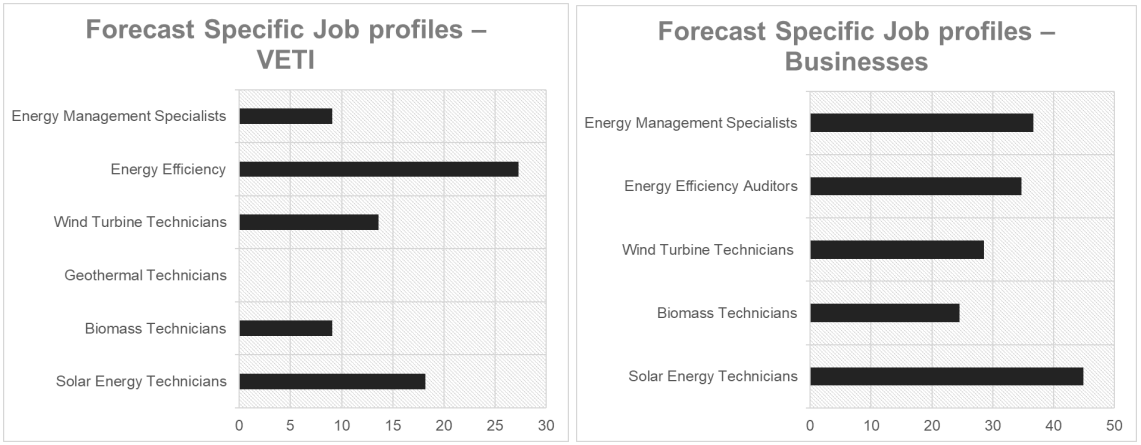

Figure 8. *Forecast for specific job profiles – VETI and Businesses*

From a business perspective, solar energy technicians and energy management specialists are the most in-demand roles, followed by wind turbine technicians and energy efficiency inspectors. A lack of detailed responses regarding necessary competencies suggests limited industry understanding of the specific skills required for these positions, further emphasizing the need for targeted training and stronger collaboration between VET providers and employers.

The Agro Processing and Wood Processing sectors also present significant growth potential. Over the next three years, demand for CNC operators, furniture makers, and assemblers is expected to rise by 35–40%, driven by export opportunities and local market needs. Additionally, emerging roles such as food safety experts and plant-based food scientists are gaining importance as sustainability and innovation reshape these industries.

To meet these evolving demands, Kosovo's VET programmes must focus on curriculum modernization, expand WBL opportunities, and strengthen public-private partnerships. Investments in green and digital skills training, coupled with capacity building for instructors, are essential to preparing the workforce for future challenges and ensuring the competitiveness of Kosovo's economy.

6. Analysis and Discussion

This section provides an in-depth analysis of the findings, contextualized within best practices, national priorities such as the Smart Specialization Strategy, and the integration of cross-cutting themes, including gender inclusion and environmental sustainability.

6.1. Cross - Comparison with Best Practices

Kosovo's VET sector shows a growing commitment to aligning education with labour market needs but falls behind regional and international benchmarks in key areas. Dual VET models in countries like Germany and Switzerland exemplify the importance of public -private partnerships, well-structured work-based learning frameworks, and industry-driven curricula. Adapting these best practices to Kosovo's context presents challenges. One critical area is defining clear and consistent roles for teachers, BLOs, private sector representatives, and schools in evaluating students' performance. While Kosovo has a certification system in place, it lacks experience in evaluating standardized skills, particularly in emerging sectors like ICT and renewable energy, where the availability of trained instructors is limited. Teachers often struggle to support students effectively due to outdated training and insufficient practical experience. Engagement between VET

schools and businesses is frequently informal, relying on ad hoc relationships rather than formal agreements. Employers should play a more active role in VET programmes, supported by government-provided incentives and initiatives to build sustainable partnerships.

Sharing success stories from dual VET programmes (peer-to-peer) and emphasizing mutual benefits could help shift the perception that employer participation is merely a favour to schools. Workplace safety remains a pressing concern. Many companies lack adequate insurance policies and safety regulations, while health and accident coverage for students is often overlooked. Improved regulatory frameworks, coupled with awareness campaigns and engagement with business associations, are necessary to establish safer and higher-quality training environments. Private sector involvement in Kosovo remains limited compared to advanced economies where companies actively contribute to curriculum design and provide in-house training. Regional neighbours have made progress in integrating ICT and renewable energy into their VET systems, aligning these sectors with national development strategies. Kosovo, despite identifying similar priorities, struggles to scale up sector-specific training and incorporate technological advancements into its VET curricula.

Though progress has been made, challenges persist. Trainers often lack up-to-date ICT skills, and employers are unclear about their roles and responsibilities within the Dual VET framework. Successful examples, such as in Peja and Prishtina, demonstrate the benefits of incremental, sector-specific implementation. Noteworthy successes in agriculture and food technologies highlight the potential for Dual VET, but coordination issues and outdated contracts prevent broader application. Establishing clearer responsibilities for schools and companies, awareness campaigns, and private sector incentives supported by KCC and sector associations are crucial next steps.

Adopting practices such as standardized apprenticeships, financial incentives for industry participation, and continuous professional development for VET instructors could significantly enhance Kosovo's Dual VET programmes. Best practices from successful initiatives include final training contracts aligned with current legislation, meaningful student engagement, and financial incentives for high-achieving students, as seen in Viti. Addressing challenges such as inconsistent supervision, irrelevant tasks for VET students in placements, and student readiness through improved training alignment and tailored programmes will further strengthen the VET system.

6.2. Alignment of VET Capacities and Private Sector Needs with National Priorities

Kosovo's Smart Specialization Strategy outlines priority sectors such as ICT, RE/EE, Agro-Processing, Creative Industries, and Wood Processing. These sectors hold substantial potential for economic growth and job creation, yet the VET system struggles to fully meet the skill demands they present. The ICT sector, for example, faces acute shortages in advanced programming and cybersecurity skills, despite being a strategic focus of the national agenda. Although ICT offerings in VET schools and private training centres have expanded, outdated curricula and limited practical exposure leave graduates underprepared. Despite an 88% growth in ICT companies between 2019 and 2023, 74% of employers report challenges in filling senior-level positions like software developers and system architects. Similarly, in the RE/EE sector, the transition to a greener economy is hampered by a lack of training infrastructure, with only three accredited energy-related occupational standards and minimal student enrolment in related profiles. Of the 25 schools offering energy-related profiles, many lack the resources to deliver adequate training, contributing to workforce shortages. In contrast, the wood processing sector demonstrates better alignment with industry needs, supported by increasing company numbers and employment opportunities. However, gaps persist in areas like

CNC programming and advanced machinery operation, which require targeted curriculum updates and enhanced training infrastructure.

These findings highlight the urgent need for modernization and closer alignment between VET programmes and sector-specific demands across industries. Addressing these gaps requires strengthened collaboration between VET institutions and industry leaders, supported by investments in modern training facilities, capacity-building for instructors, and streamlined accreditation systems. Practical training must align more closely with curriculum content to reduce skill mismatches, particularly in sectors like ICT and RE/EE, where digital and renewable energy skills are increasingly critical. To foster alignment, institutions must actively engage businesses through networking events, MOUs, and partnerships that identify and address challenges in Dual VET programs. Media campaigns can raise awareness about the benefits of these programmes, while legislative and regulatory adjustments are needed to simplify administrative processes, reduce barriers, and enable curriculum flexibility.

Sector-specific curriculum development should incorporate emerging priorities, such as digitalization and sustainability, to align training with evolving labour market demands. Practical modules in renewable energy, energy efficiency, and soft skills like communication and teamwork should be prioritized. Primary school outreach to encourage interest in technical profiles such as energy efficiency, renewable energy, manufacturing, and ICT can build a pipeline of skilled students entering VET programmes. Despite progress, businesses remain hesitant to participate in the Dual VET system due to a lack of understanding of its benefits, legal frameworks, and financial implications. Schools, meanwhile, face administrative burdens that limit their ability to form effective partnerships with the private sector. Incentivizing business involvement through government support, harmonizing legislation with VET policies, and coordinating efforts among MESTI, municipal authorities, and the private sector are essential to aligning VET profiles with labour market needs. Addressing the misalignment between education and market demands is particularly urgent given high migration rates and a shortage of skilled workers. Encouraging stronger partnerships, reducing administrative costs, and ensuring students are prepared for local labour market needs rather than global ones will help create a VET system that supports Kosovo's economic growth while retaining talent within the country.

6.3. Integration of Gender and Environmental Consideration

Significant challenges persist in integrating gender and environmental considerations into Kosovo's VET sector, despite their critical importance for fostering an inclusive and sustainable workforce. Women remain underrepresented in technical fields, with participation as low as 3% in energy-related profiles. Female enrolment is disproportionately concentrated in traditionally female-dominated sectors like garment-making and textile design, driven by cultural norms, societal expectations, and limited targeted policies to promote inclusivity in technical and high-growth industries.

Progress has been noted in ICT and energy sectors, where competitive earnings and flexible online work opportunities have attracted more women. However, systemic barriers remain. Gender stereotypes, outdated curricula, and insufficient awareness campaigns continue to discourage girls from pursuing nontraditional fields such as mechanics, ICT, and renewable energy. Scholarships, gender-sensitive infrastructure, and awareness programmes targeting parents and students are critical for breaking these barriers. Practical activities, such as industry-themed events and hands-on workshops for younger children, could spark early interest in technical professions and Dual VET opportunities. Efforts to encourage gender inclusivity in Dual VET programmes highlight the importance of scholarships and targeted support to address representation gaps. Awareness campaigns must go beyond promoting superficial parity, focusing instead on empowering women to make informed career choices. Schools and businesses must actively collaborate to

dismantle stereotypes and foster natural, voluntary gender equality. Greater representation of women in high-demand sectors such as ICT and renewable energy requires sustained initiatives, including mentorship programmes, flexible training schedules, and exposure to successful female role models in these fields. On the environmental front, sustainability is acknowledged in national policies like Kosovo's Climate Change Strategy but remains inadequately reflected in VET curricula and training programmes. For instance, the renewable energy sector, vital to Kosovo's green transition, offers minimal specialized training despite its growing importance. Best practices from countries with advanced green skill integration such as embedding sustainability modules across all VET profiles could guide Kosovo in building a future-ready workforce.

Environmental awareness is gradually being incorporated into VET programmes through extracurricular activities like eco-clubs, recycling initiatives, and renewable energy workshops. Moreover, green agenda is considered as an important topic for businesses, with approximately two-thirds of the companies arguing it is highly important for their operations, portrayed in figure 9. Integrating sustainability into health and safety modules and aligning curricula with standards such as ISO 14001 further enhances practical learning. However, these efforts must scale significantly to address the urgency of climate change and environmental challenges effectively.

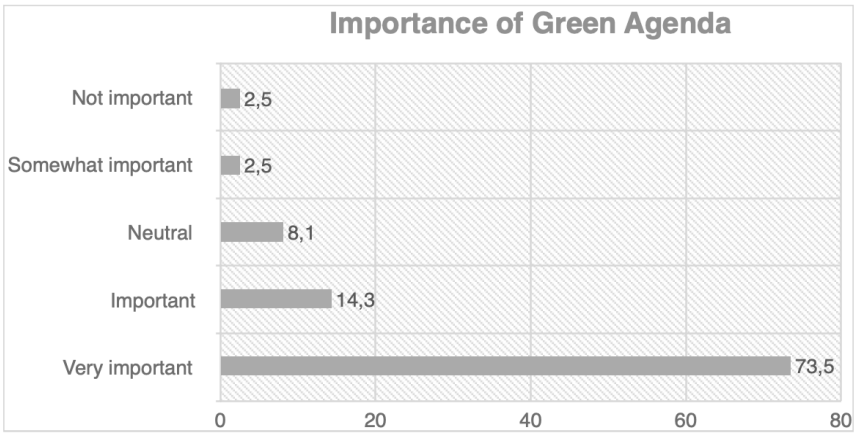

Figure 9. *Importance of Green Agenda*

Promoting gender equality and environmental sustainability requires systemic, coordinated actions, including:

- **Expanding scholarships** and mentorship programs for women in technical and green economy fields.
- **Introducing mandatory green skills** training across all VET profiles to embed sustainability as a core competency.
- **Strengthening collaboration** with donors and international organizations to pilot inclusive and environmentally sustainable VET initiatives.

By addressing these areas, Kosovo can create a VET system that not only meets labour market demands but also drives social equity and supports its green transition.

7. Recommendations

This section outlines actionable recommendations to address the gaps identified in the findings and analysis. Recommendations are categorized into quick wins for immediate improvements and strategic recommendations for long-term sustainability in Kosovo's VET sector.

7.1. Quick Wins

Strengthening collaboration between VET schools and the private sector, along with enhancing gender inclusivity, are key steps for addressing immediate gaps in Kosovo's VET landscape. Quick wins focus on implementing targeted, practical measures that can generate rapid and meaningful impact, portrayed in figure 10. By fostering stronger partnerships between schools and businesses, incentivizing innovation, improving policies, and creating support mechanisms for underrepresented groups such as women, these initiatives aim to improve the quality and accessibility of VET programs. The following actions prioritize scalability, inclusivity, and alignment with labour market demands, ensuring that the VET system can respond effectively to both immediate challenges and emerging opportunities.

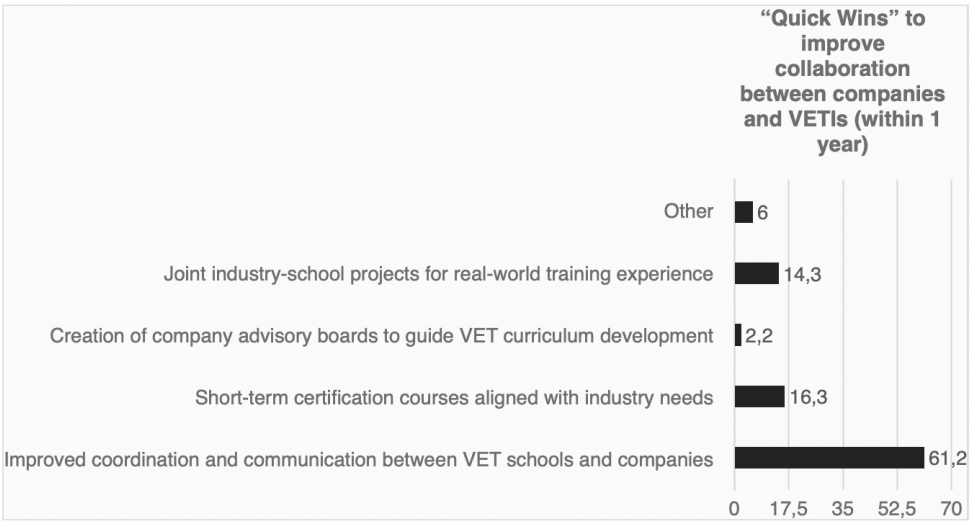

Figure 10. *Quick Wins for improvement of collaboration between companies and VETIs*

7.1.1. Strengthening VET and Private Sector Collaboration

To address immediate gaps in collaboration between VET schools and the private sector, the following actions are recommended:

- **Incentivize private sector engagement:** Provide grants or tax incentives for companies partnering with VET schools to deliver Dual VET. Focus on high-demand sectors such as ICT, and Renewable Energy. Raising levies as added value incentive form to improve private sector engagement with VET institutions.
- **Establish liaison units:** Create dedicated liaison teams within VET schools to act as a bridge between schools and businesses, ensuring smoother coordination and alignment with market needs.
- **Enhance pedagogical capacity:** Organize short-term training sessions for company mentors and VET instructors to improve their ability to deliver work-based learning (WBL) effectively.

- **Peer-to-Peer learning for best practices:** Facilitate Peer to Peer learning networks between successful models, such as in-house training centres (e.g., Cacttus Education), and other private sector actors to encourage replication of effective approaches.
- **Streamline regulatory frameworks:** Simplify processes for private sector participation in Dual VET programmes by addressing bureaucratic and policy hurdles that currently deter engagement.

7.1.2. Enhancing Gender participation in VET

To improve inclusivity in VET programmes, the following immediate actions are recommended:

- **Targeted scholarships:** Develop scholarships for women in technical profiles such as software engineering, CNC operations, and renewable energy technologies.
- **P2P mentorship programs:** Introduce peer mentorship initiatives where female role models in technical fields provide guidance and support to new students, fostering confidence and breaking stereotypes.
- **Community engagement campaigns:** Use community-driven awareness programs to highlight success stories of women in VET, focusing on overcoming barriers in male-dominated fields.

7.2. Strategic Recommendations

Strategic interventions are essential for creating a sustainable, inclusive, and future-ready VET system in Kosovo. By aligning VET offerings with market demands, operationalizing key training centres in ICT and RE/EE, and embedding principles of sustainability and inclusivity, these recommendations provide a roadmap for long-term development. The emphasis on curriculum modernization, expanded Dual VET programs, and enhanced governance frameworks ensures that VET institutions remain responsive to evolving industry needs. Additionally, targeted initiatives to foster peer-to-peer learning, integrate green skills, and promote gender inclusivity will strengthen the system's capacity to address labour market challenges while advancing Kosovo's green and digital transitions. These strategic measures aim to position the VET sector as a driving force for economic growth and social equity.

7.2.1. Aligning VET offerings with market demand

To create a long-term alignment between VET training and labour market needs, the following steps are recommended:

- **Curriculum modernization**: Regularly update VET curricula to reflect emerging technologies and industry demands, with a focus on ICT (e.g., cybersecurity, AI) and RE/EE (e.g., solar and wind energy systems, energy audits).

  To ensure the curricula are demand-driven, the private sector must take a leading role in their development and updates. This involves actively engaging private sector companies across different industries in a structured and collaborative process, enabling them to provide direct input on the skills and competencies required. Their leadership ensures that the curricula align with real-world needs and equip students with relevant, market-ready skills.
- **Expand Dual VET programmes:** Scale Dual VET frameworks across priority sectors, involving structured WBL opportunities that integrate private sector expertise.
- **Promote flexible learning:** Develop modular, adaptable training programmes that respond to sector-specific requirements and evolving market dynamics.

- **Labour market advisory boards:** Develop/strengthen advisory boards with representatives from industries, VET schools, and policymakers to monitor labour trends and guide programme development.

7.2.2. Operationalizing RE/EE and ICT centres effectively

Ensuring the success of new training centres in ICT and RE/EE is critical for Kosovo's green and digital transitions:

- **Governance and management:** Develop inclusive governance models with defined roles for public, private, and donor stakeholders to ensure accountability and responsiveness.
- **Train - the - Trainer programs:** Implement advanced training initiatives for instructors, focusing on innovative technologies and methodologies in ICT and RE/EE.
- **Accessibility and inclusion:** Design targeted outreach programmes to ensure equitable access to training, particularly for students from rural areas and underrepresented groups like women.

7.2.3. Promoting sustainability and inclusivity

Long-term sustainability requires embedding green and inclusive principles into the VET system.

- **Green skills integration:** Incorporate sustainability modules across all VET curricula, emphasizing eco-friendly practices in every sector.
- **Strengthen gender-responsive policies:** Develop policies ensuring equal access and participation for women, with performance indicators to monitor gender inclusion.
- **Foster inclusive partnerships:** Collaborate with donors and international organizations to pilot initiatives that prioritize gender and environmental consideration

8. Conclusion

This evaluation emphasizes the critical role of the VET sector in driving economic development, promoting inclusivity, and addressing critical skill shortages in priority sectors. By assessing the capacities of VET schools, examining private sector engagement, and evaluating alignment with labour market needs, the study provides a thorough understanding of existing gaps and actionable opportunities.

The findings reveal significant challenges, such as mismatches between VET profiles and industry requirements, limited training offerings in green energy and digital skills, underrepresentation of women in technical fields, and barriers to private sector participation in Dual VET programmes. Despite these challenges, the evaluation identifies promising opportunities to strengthen Kosovo's VET ecosystem. These include leveraging existing partnerships, modernizing curricula to reflect emerging technologies, addressing gender disparities through targeted interventions, and operationalizing specialized ICT and RE/EE centres to support the country's green and digital transitions.

The recommendations outlined in this report address both immediate and long-term priorities. Quick wins, such as offering scholarships for women in technical fields, incentivizing private sector collaboration, and creating peer-to-peer learning networks, provide practical solutions to urgent issues. Meanwhile, strategic interventions including curriculum modernization, expansion of Dual VET frameworks, and establishment of governance structures for specialized training centres pave the way for a more resilient, inclusive, and future-ready VET system.

By adopting these recommendations, the "Skills for sustainable jobs in Kosovo" projectcan enhance the VET sector's capacity to meet its objectives. Strengthening VET inclusivity will not only improve job

opportunities for youth and women but also equip Kosovo's workforce to adapt to the evolving demands of a dynamic labour market. Aligning these efforts with national priorities, such as the Smart Specialization Strategy and climate resilience goals, further amplifies the project's contribution to sustainable economic growth and Kosovo's aspirations for European integration.

In conclusion, this evaluation offers a clear roadmap for bridging current gaps, fostering innovation, and integrating gender and environmental considerations into the VET system. By addressing these critical priorities, the project has the potential to deliver transformative outcomes that benefit individuals, industries, and the broader economy, ultimately advancing Kosovo's green and inclusive development agenda.

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10. Annexes

10.1. Annex 1. Graphical Representation of main quantitative findings - VETIs

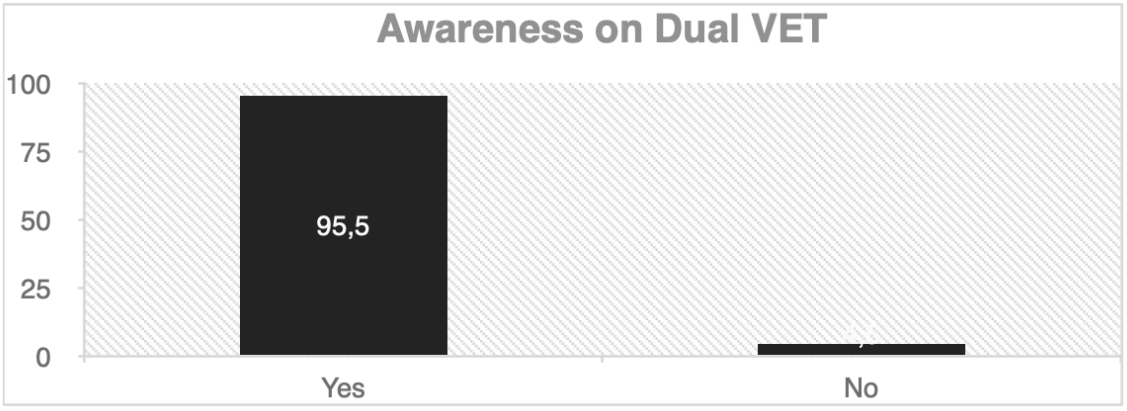


Figure 11. Awareness on Dual VET

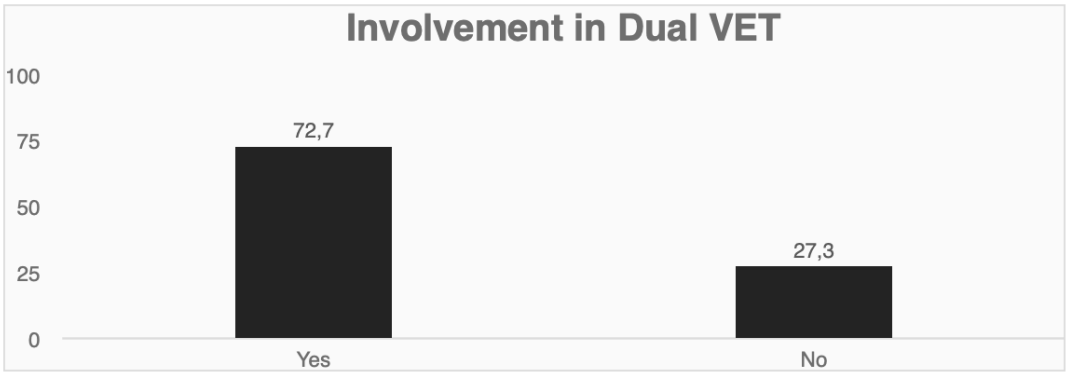


Figure 12. Involvement in Dual VET

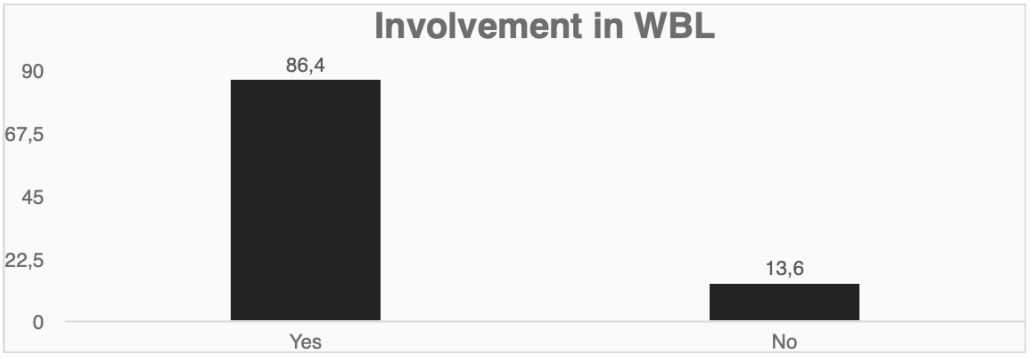


Figure 13. Involvement in WBL

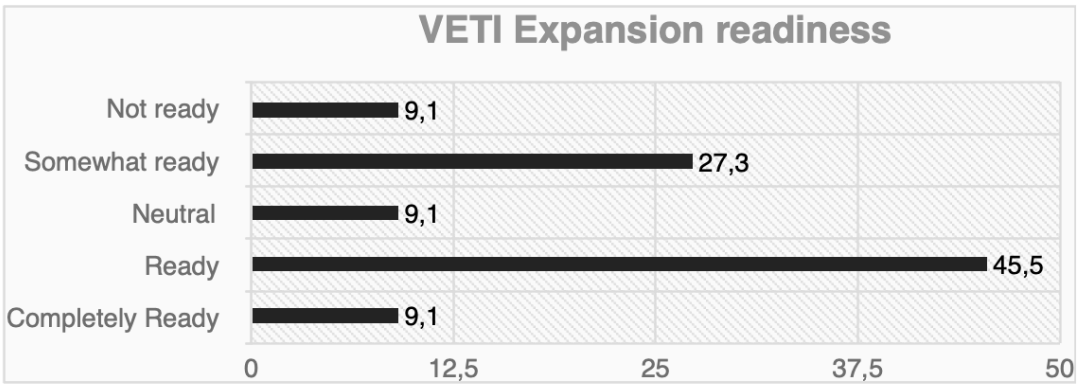


Figure 14. Readiness of VETI for extension of Dual VET

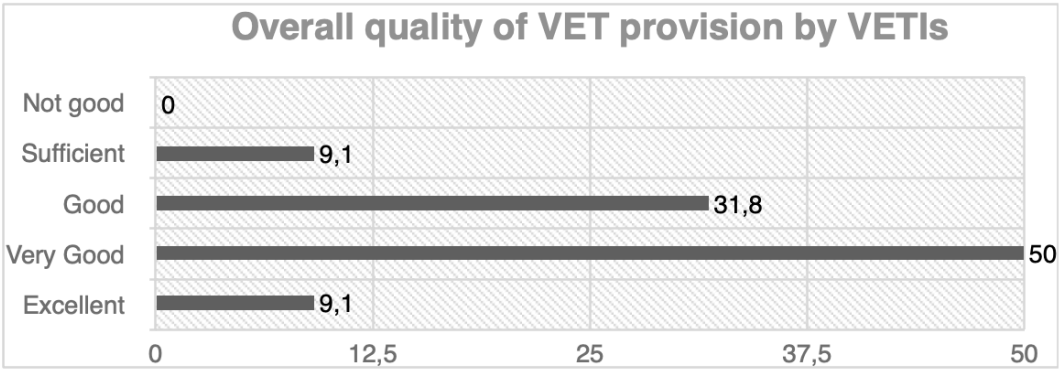


Figure 15. Overall quality of VET provision by VETIs

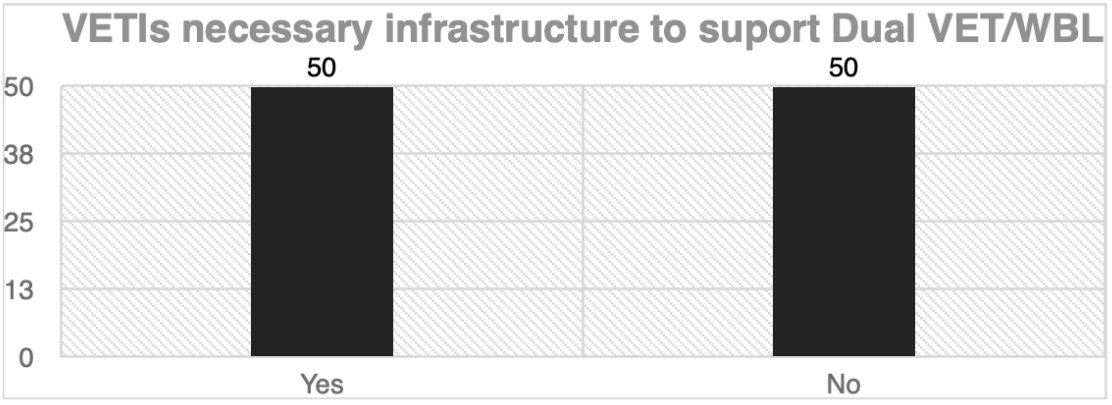


Figure 16. VETIs necessary infrastructure (e.g., equipment, tools, workspaces) to support Dual VET/WBL

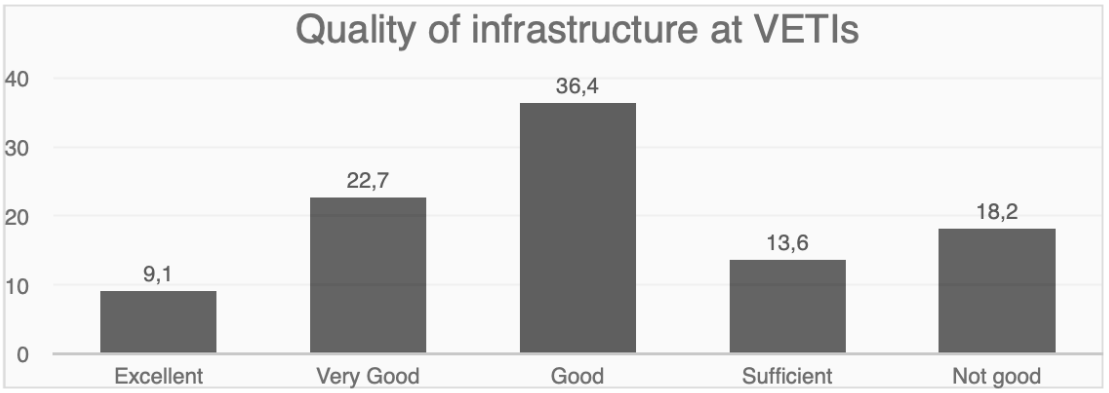


Figure 17. *Quality of infrastructure (labs, workshops, tools, and equipment) at your schools/training centre*

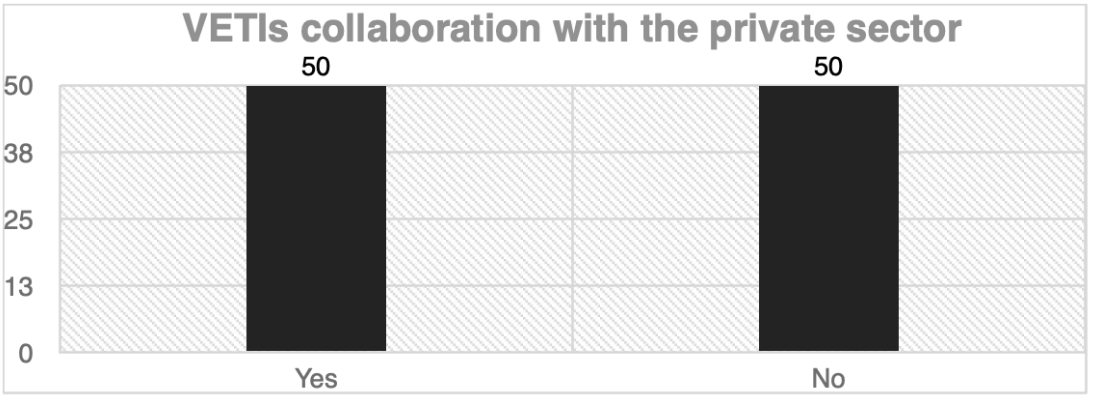


Figure 18. *Collaboration with any company to secure access to infrastructure (e.g., machinery, tools, or workspace) to support Dual VET/WBL for students*

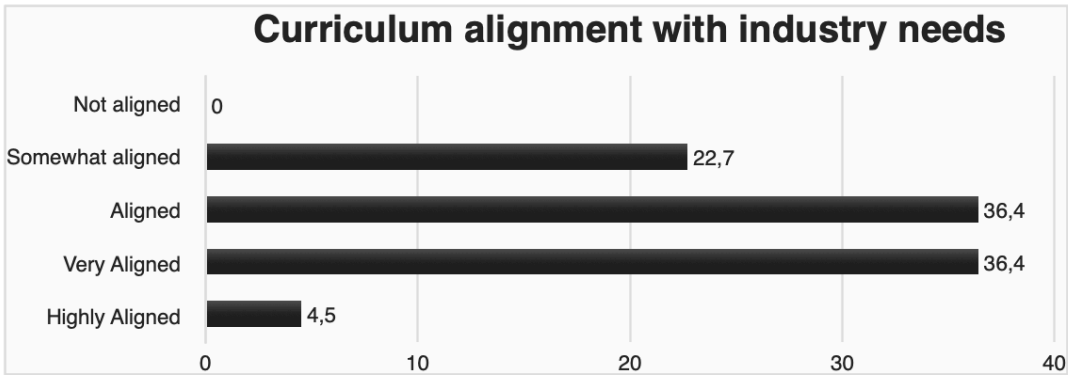


Figure 19. *Alignment of VETI curricula with practical needs of the industry*

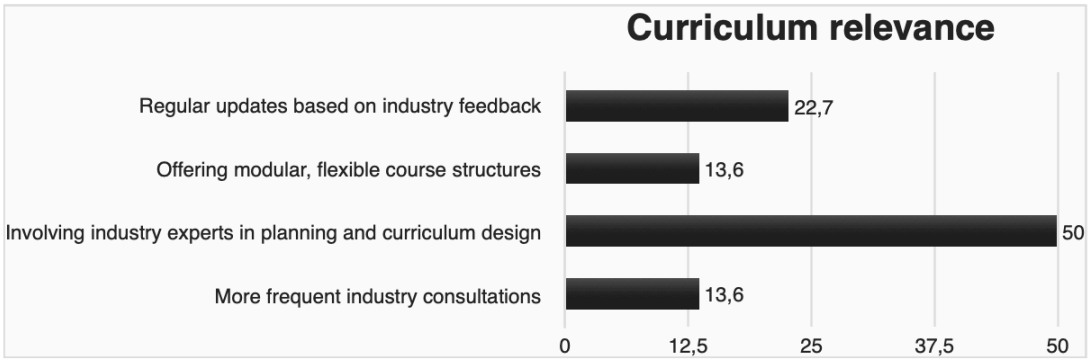


Figure 20. VETI ensuring the curriculum stays relevant to evolving industry needs

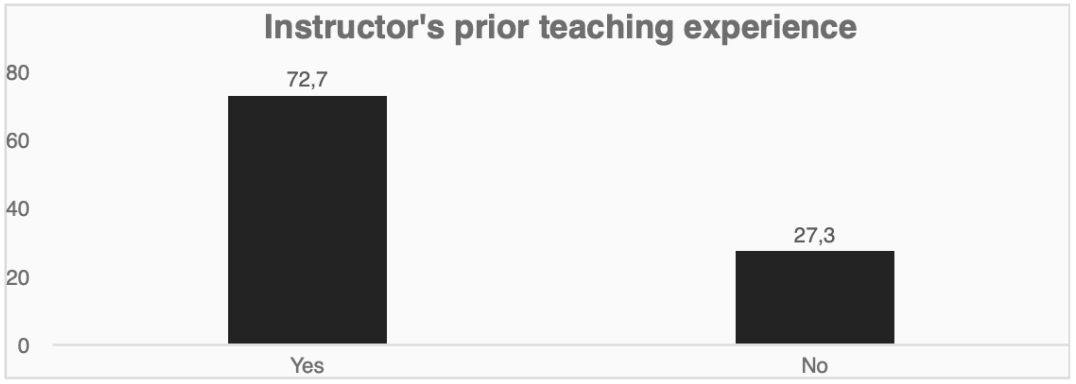


Figure 21. Instructors' prior teaching experience or qualifications in the relevant industry

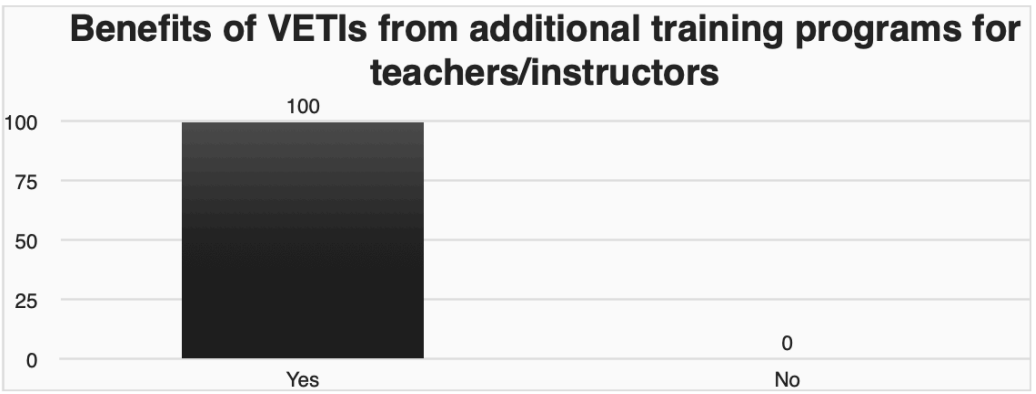


Figure 22. VETIs benefitting from additional training programmes for teachers/instructors to improve their teaching/training effectiveness

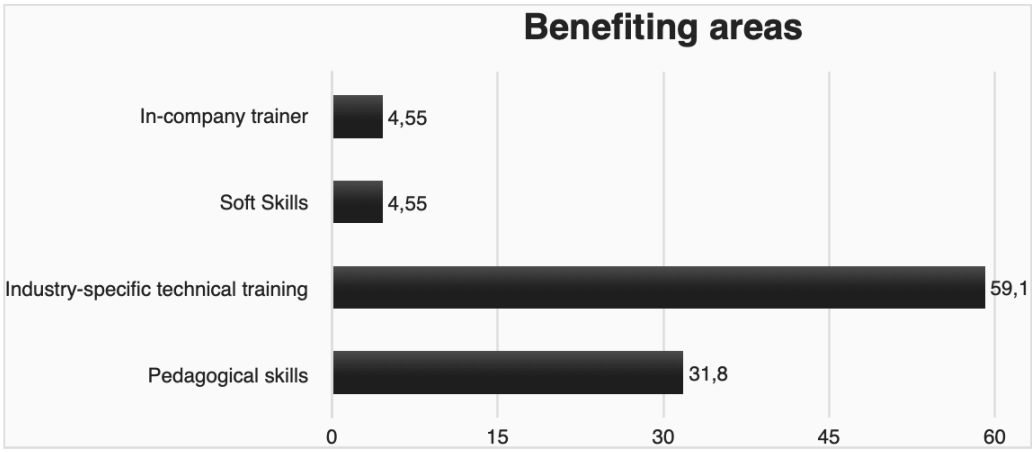


Figure 23. Areas where VETIs can benefit from additional training

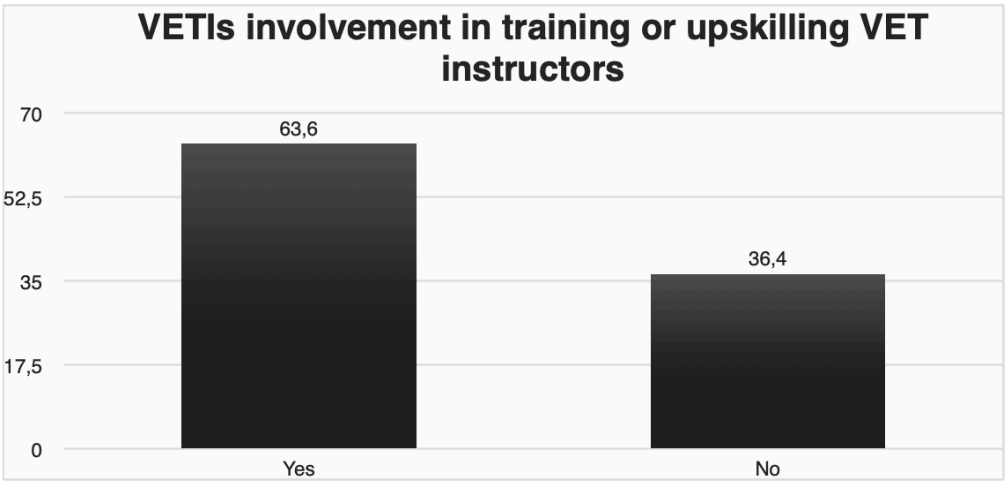


Figure 24. VETIs involvement in training or upskilling VET instructors

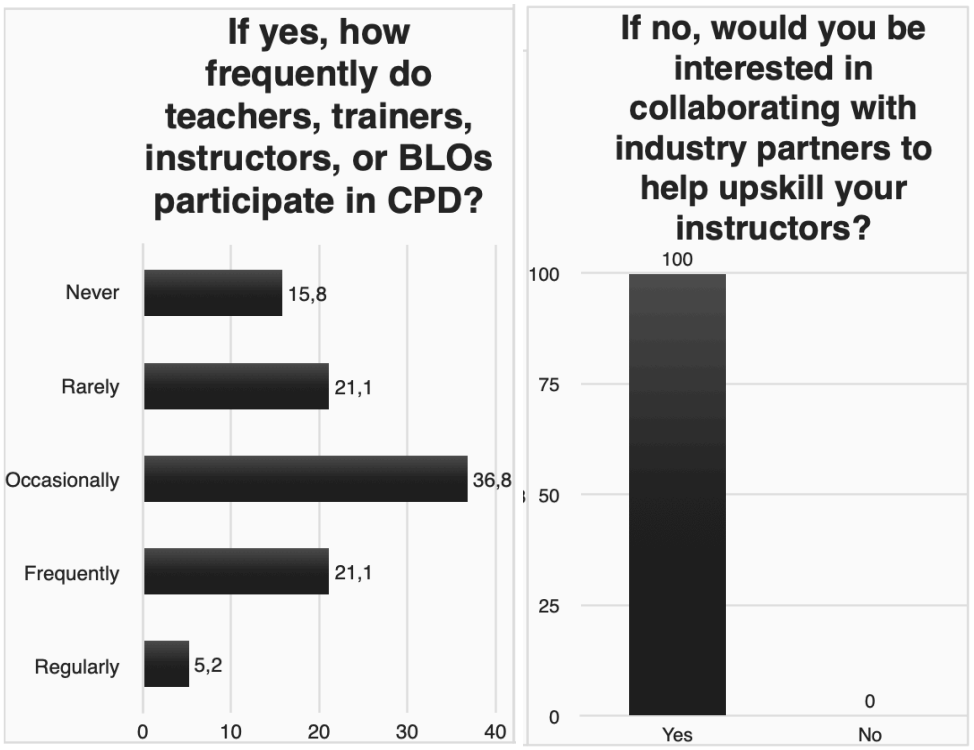


Figure 25. *Frequency of participation in Continuing Professional Development (CPD) and interest of collaborating with industry partners in upskilling VETI instructors*

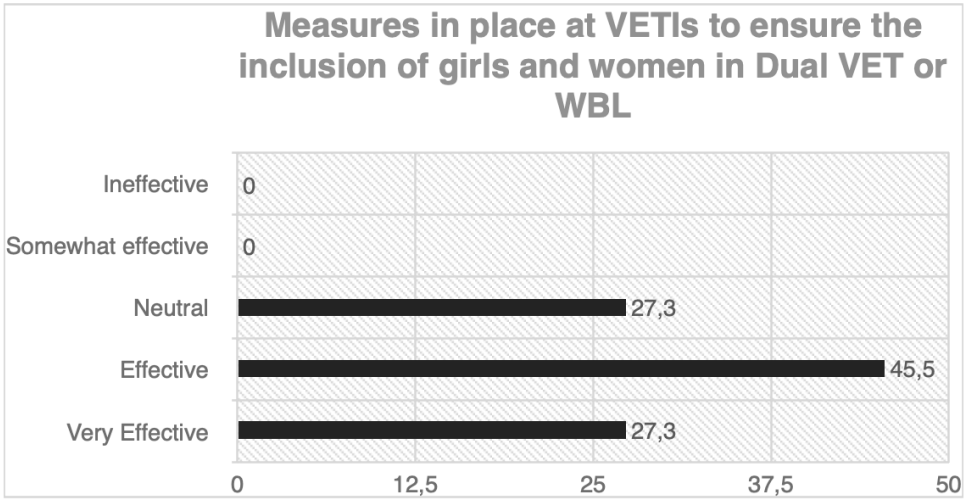


Figure 26. *Measures in place for inclusion of girls and women*

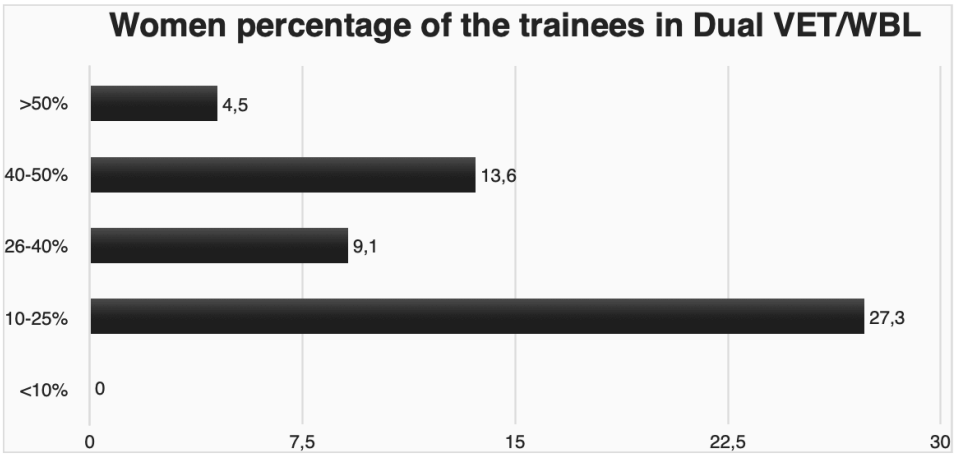


Figure 27. Percentage of women trainees in Dual VET

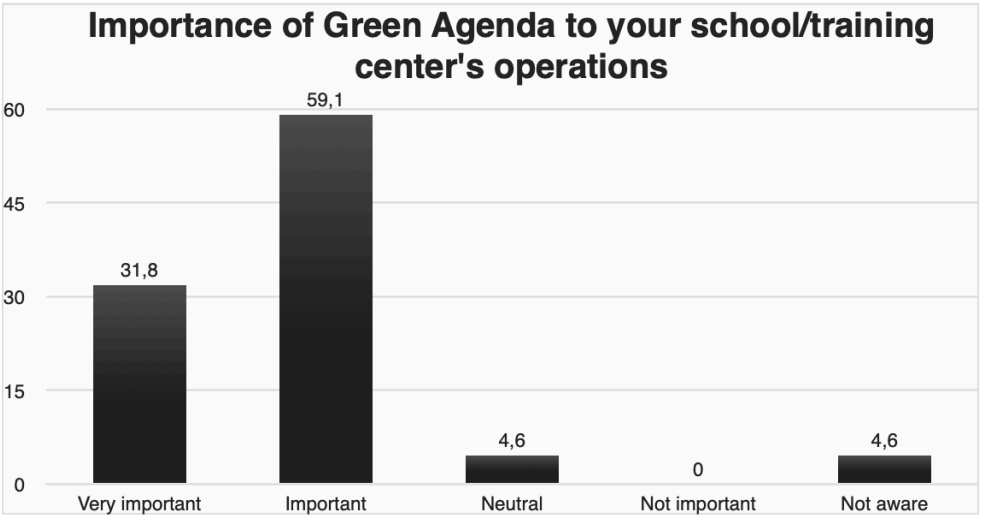


Figure 28. Importance of Green Agenda

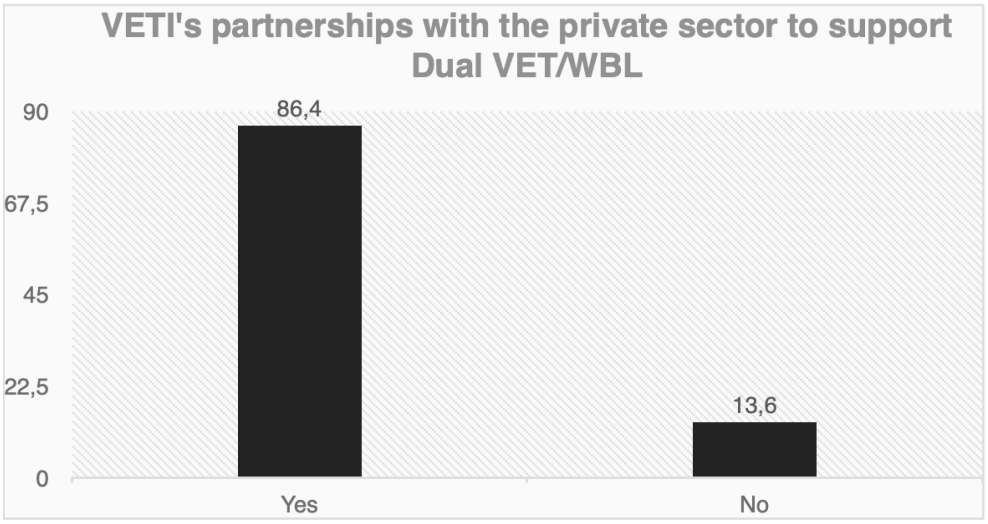


Figure 29. VETIs partnerships with companies in supporting Dual VET/WBL

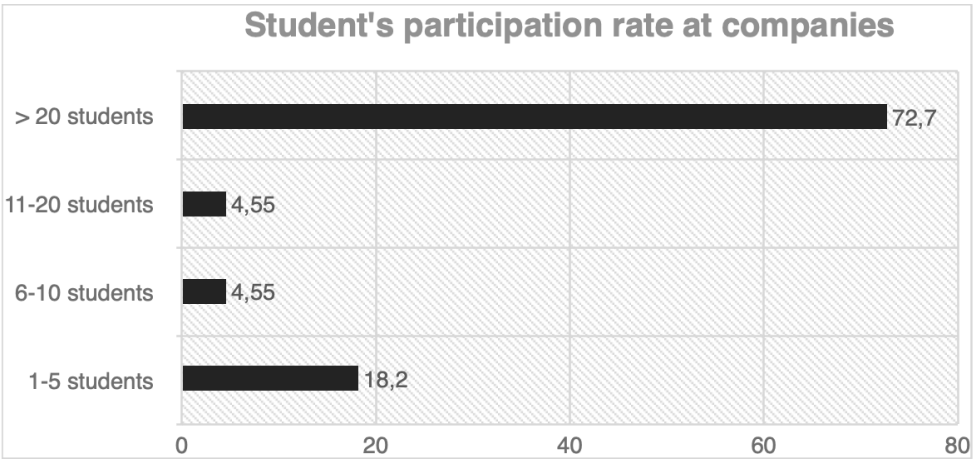


Figure 30. Students from VETIs in Dual VET/WBL

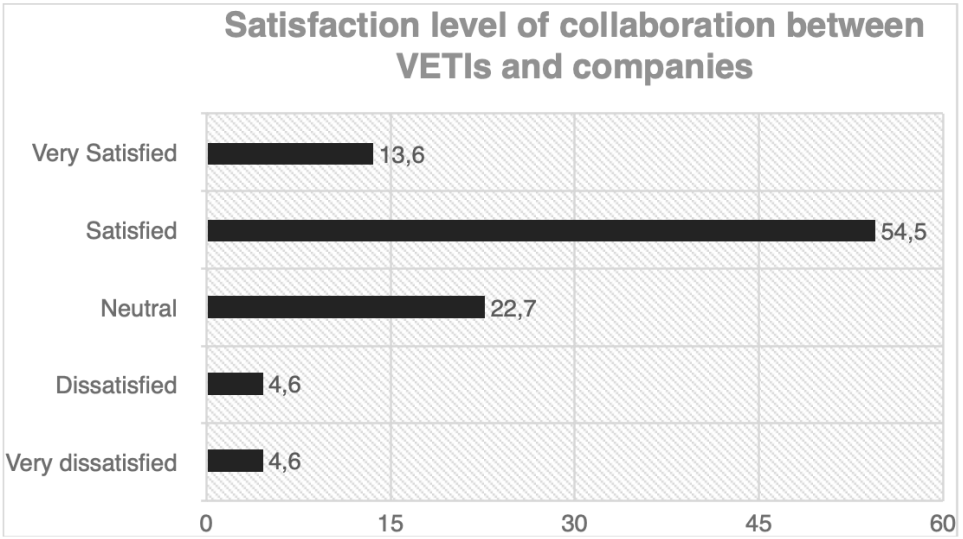


Figure 31. Level of satisfaction of collaboration between VETI and companies

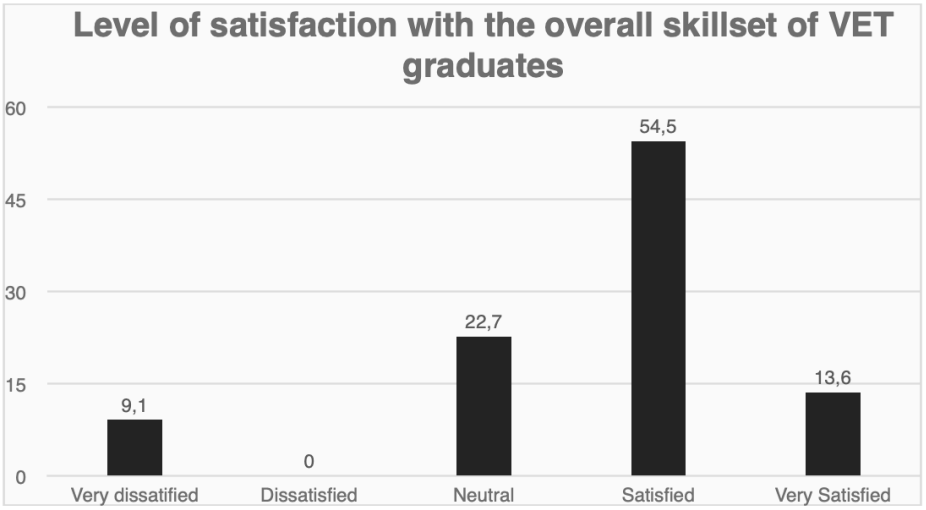


Figure 32. Level of satisfaction with the overall skillset of VET graduates

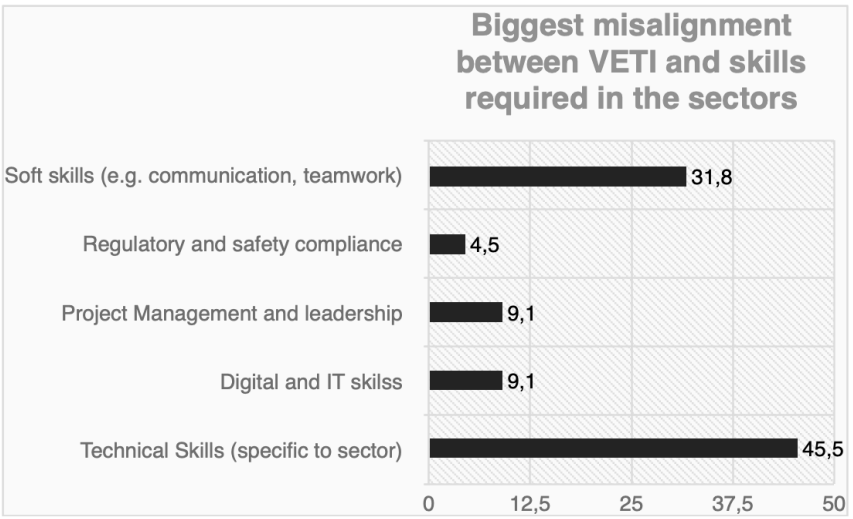


Figure 33. Biggest misalignment between VETI and skills required in the sectors

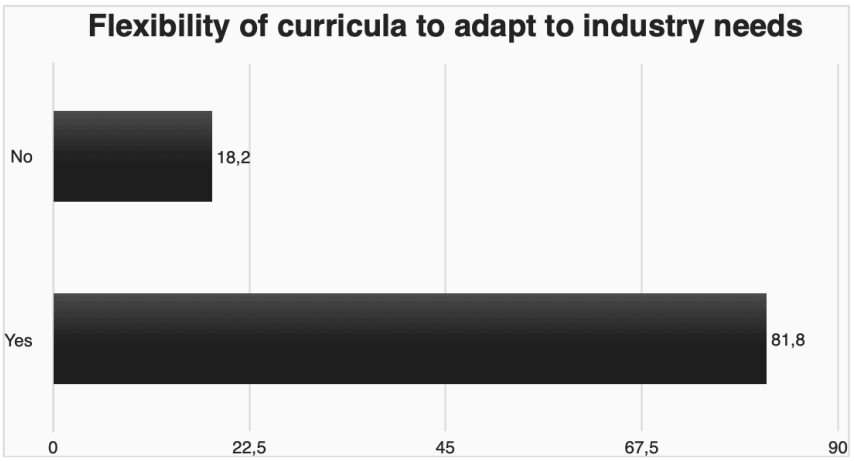


Figure 34. Flexibility of curricula to adapt to industry needs

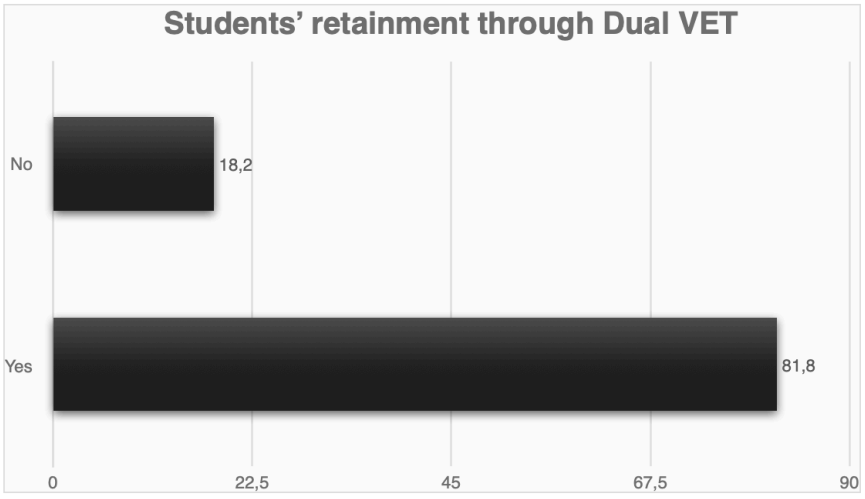


Figure 35. Students' retainment through Dual VET

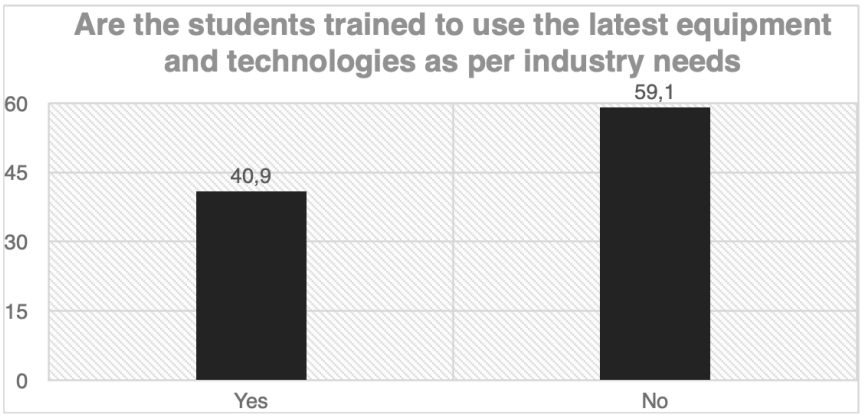


Figure 36. Trained students with latest equipment and technologies as per industry needs

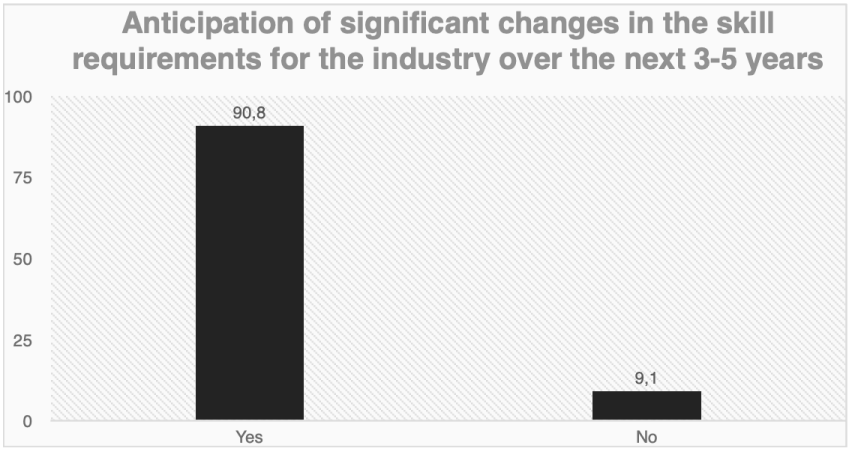


Figure 37. Significant changes in skill requirements for the industry over the next 3-5 years

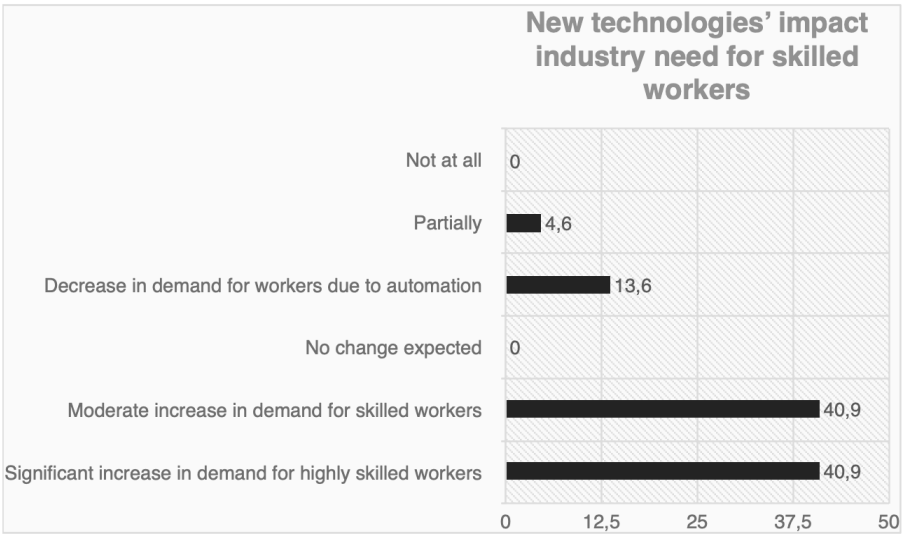


Figure 38. New technologies' impact industry need for skilled workers

10.2. Annex 2. Graphical Representation of main quantitative findings – Businesses

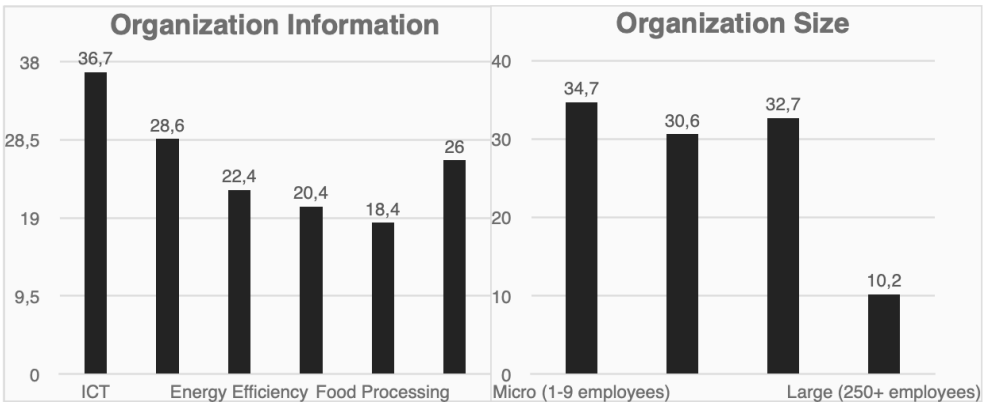


Figure 39. Business demographics

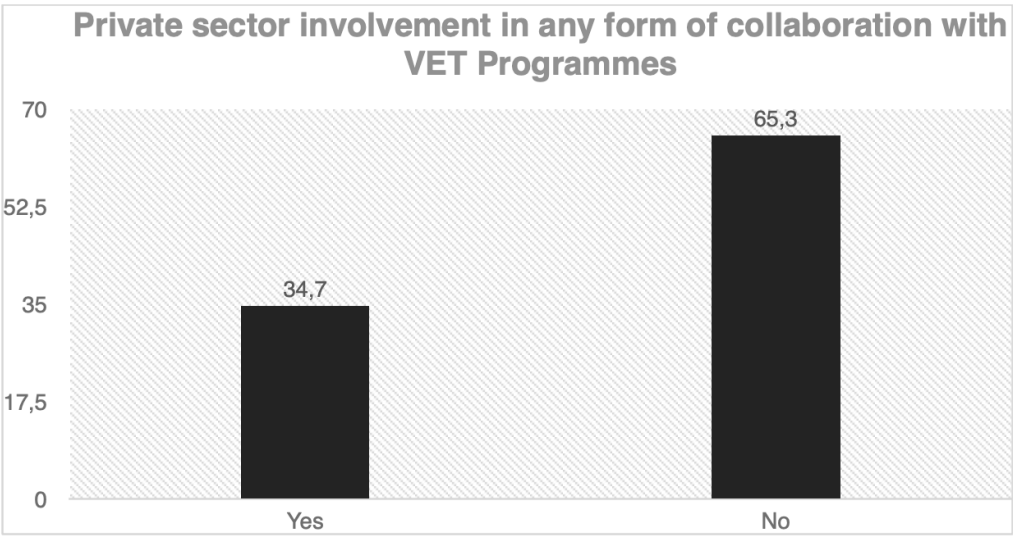


Figure 40. Company involvement in Dual VET

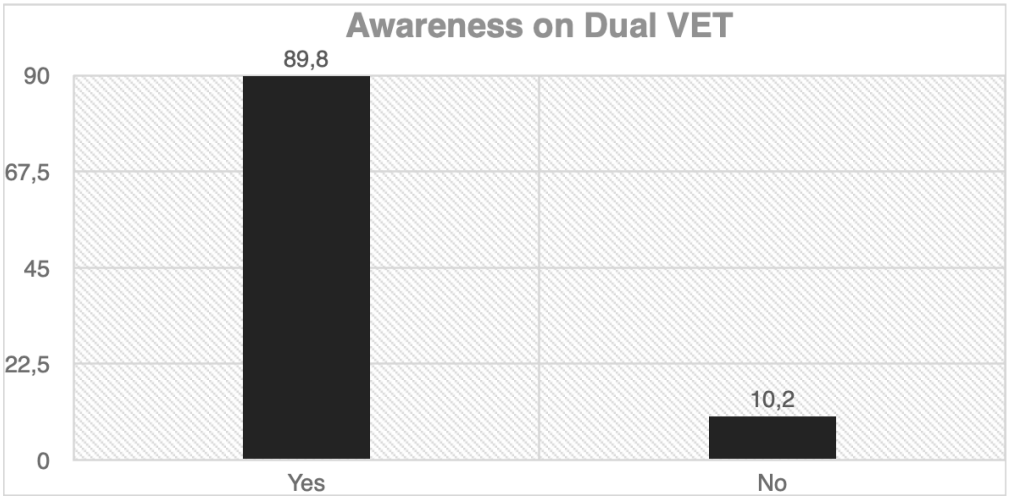


Figure 41. Knowledge/Awareness on Dual VET

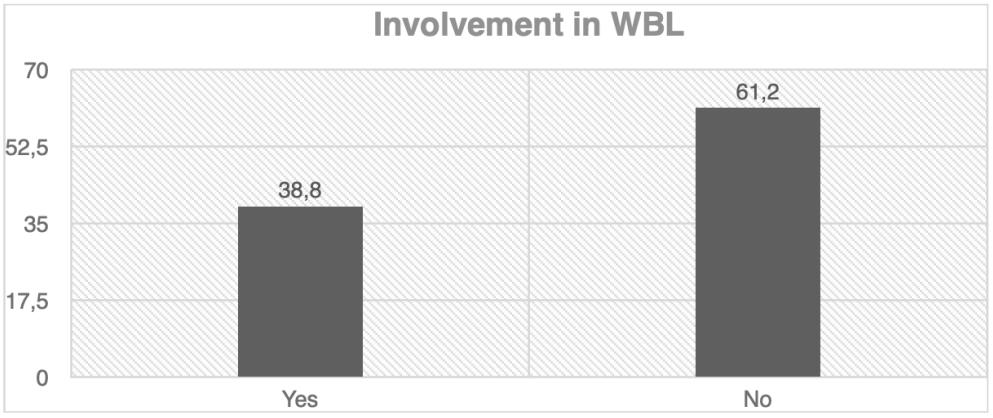


Figure 42. Company involvement in Work Based Learning

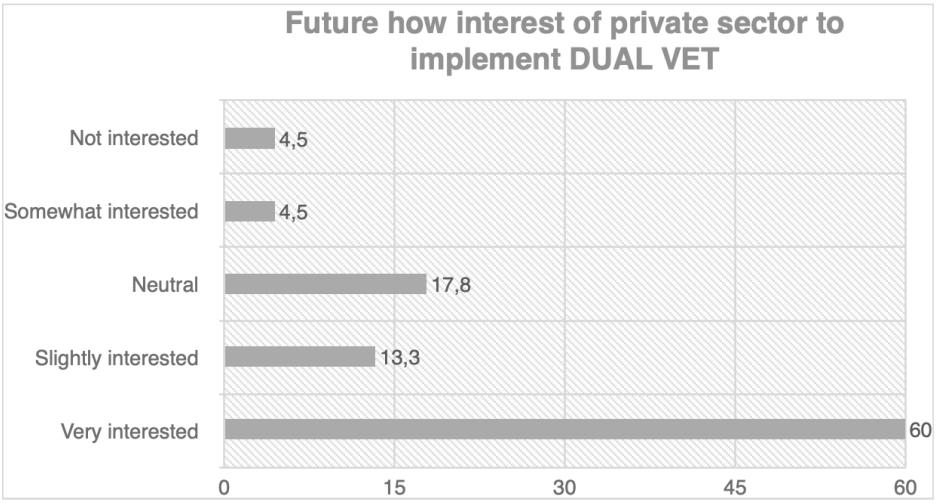


Figure 43. Future interest of companies to implement Dual VET

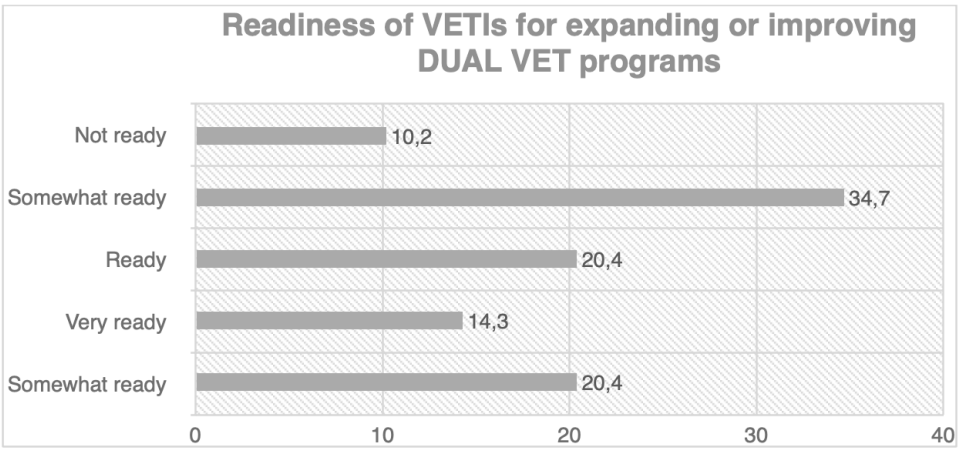


Figure 44. Company perceptions regarding the readiness of VETIs to expand in Dual VET

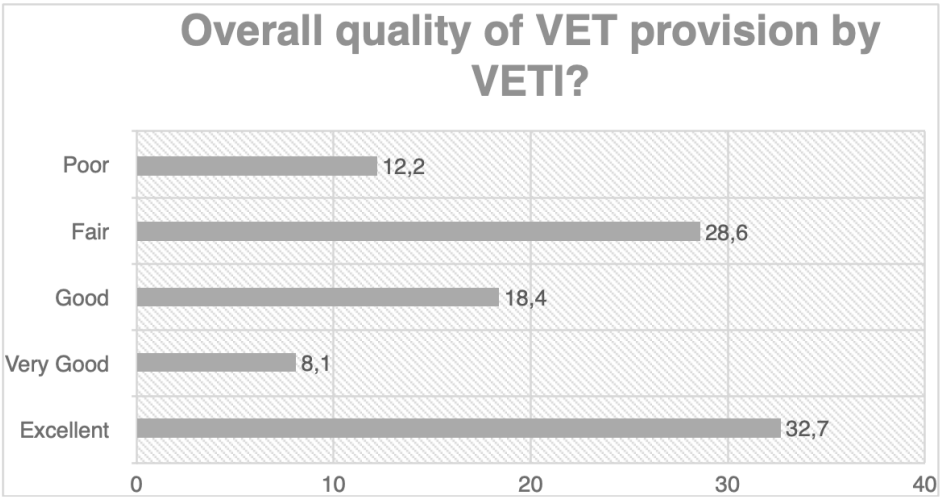


Figure 45. Qualify of VET programmes

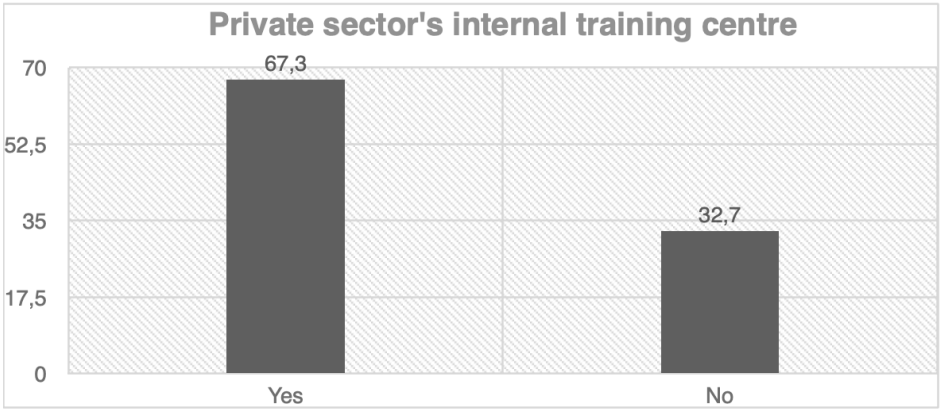


Figure 46. Companies with an internal training centre

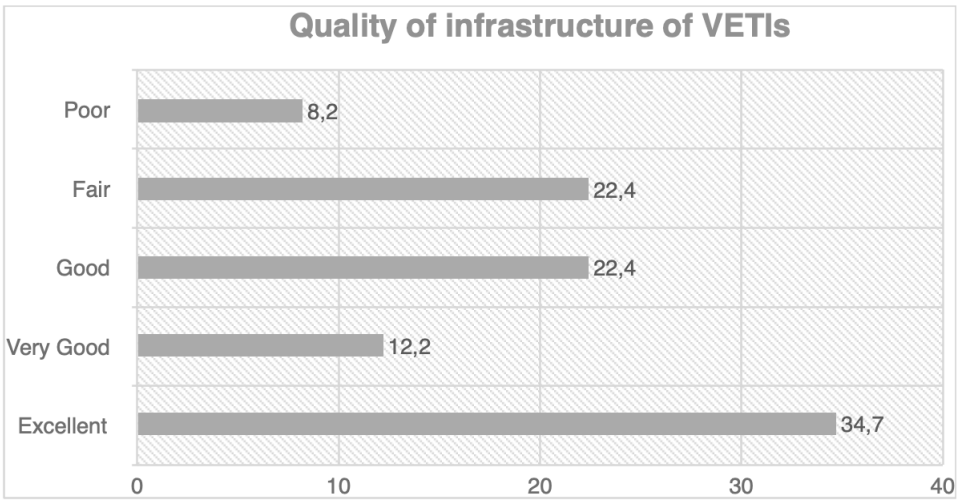


Figure 47. Quality of infrastructure of VETIs

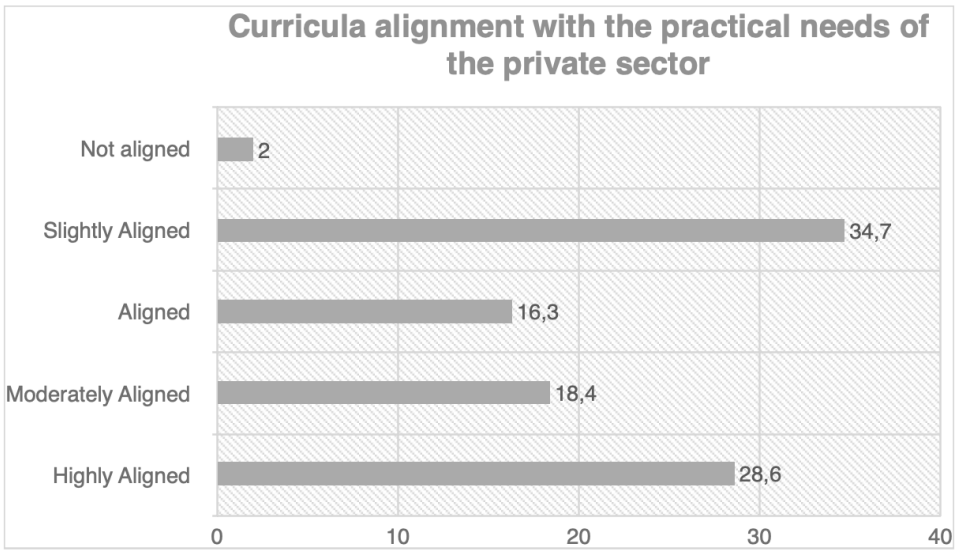


Figure 48. Curricula alignment with practical needs of companies

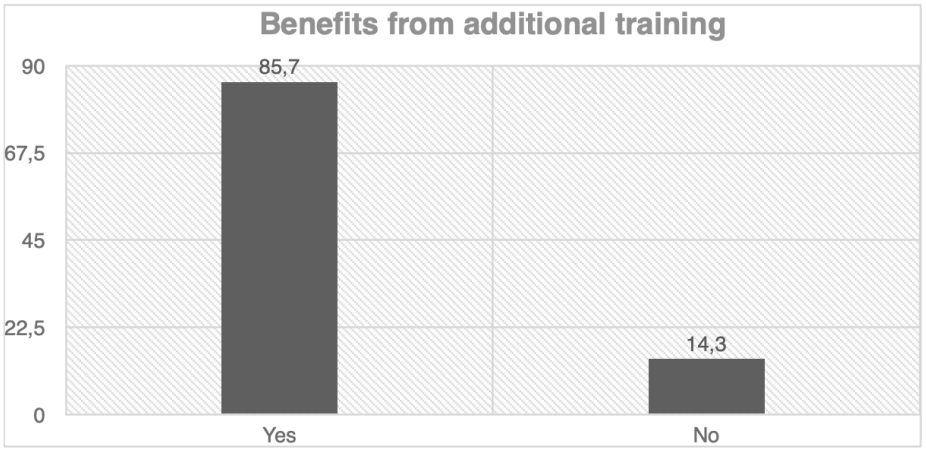


Figure 49. Benefits from additional training

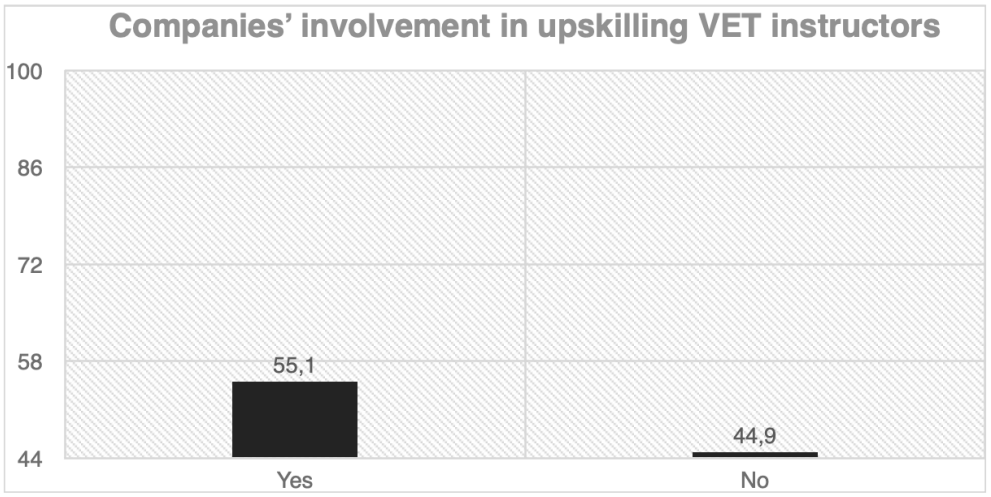


Figure 50. Companies' involvement in upskilling VET instructors

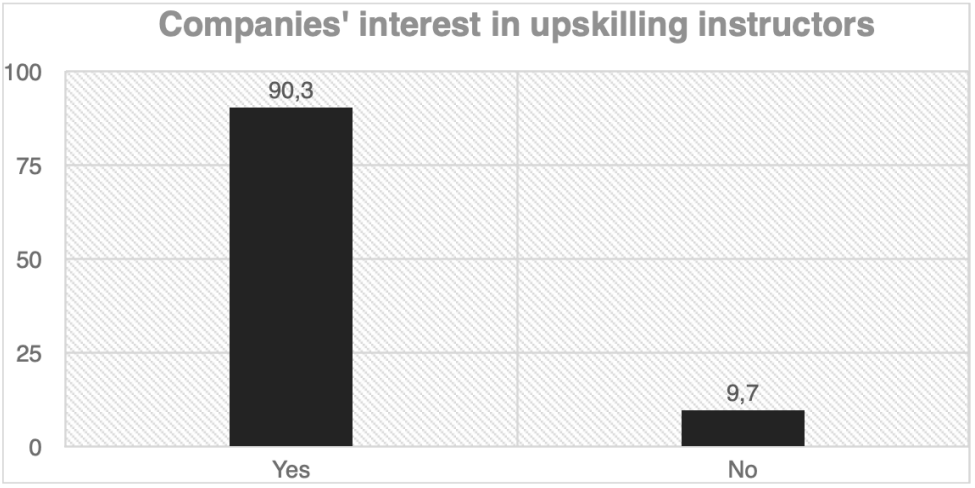


Figure 51. Companies' interest in upskilling instructors

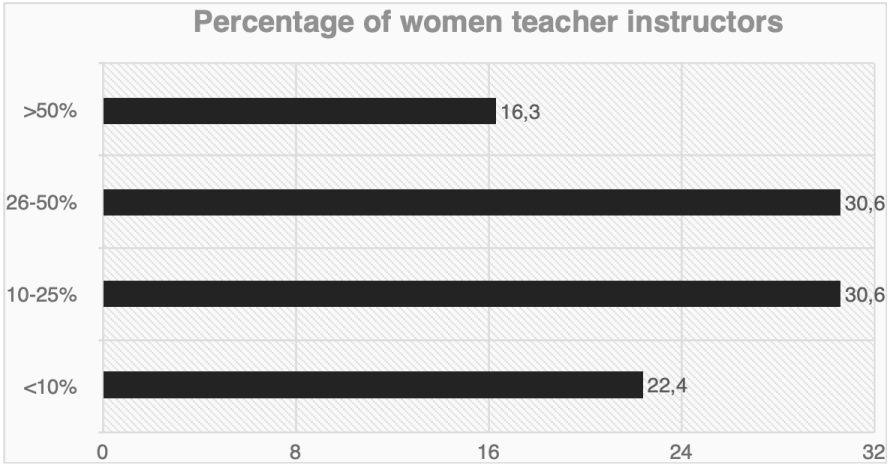


Figure 52. Percentage of women teacher instructors

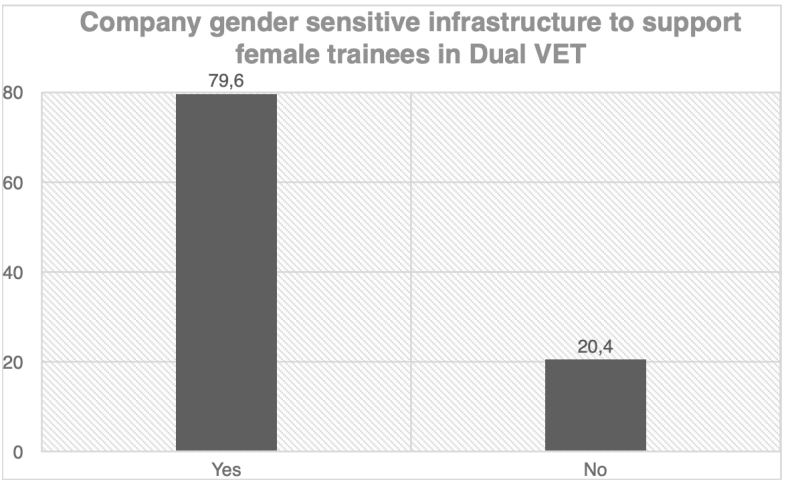


Figure 53. Company gender sensitive infrastructure to support female trainees in Dual VET

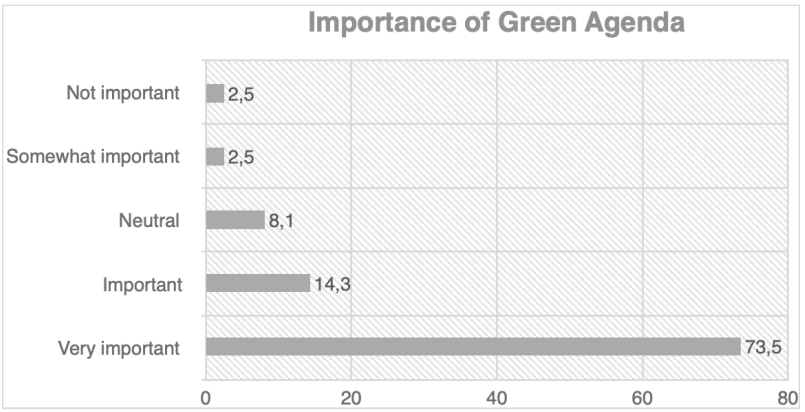


Figure 54. Importance of Green Agenda (2)

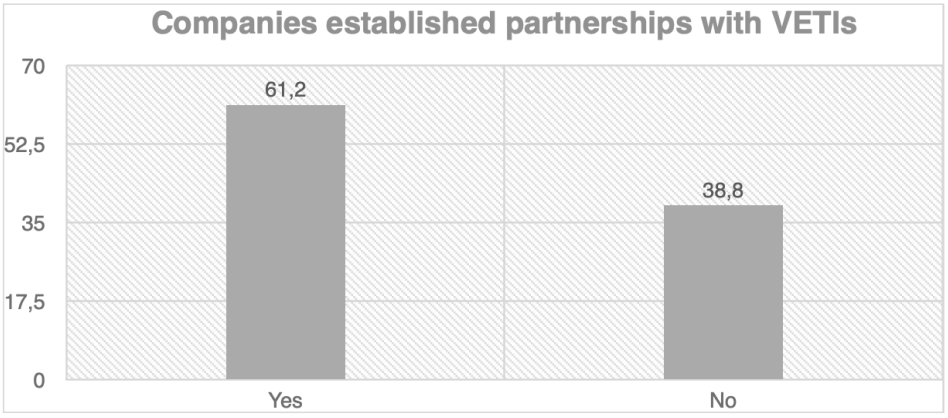


Figure 55. Company established partnerships with VETIs

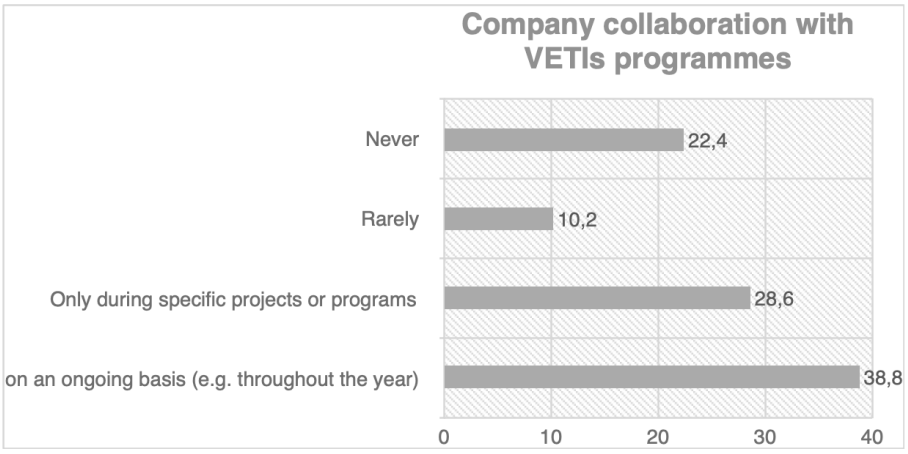


Figure 56. Company collaboration with VETIs programmes

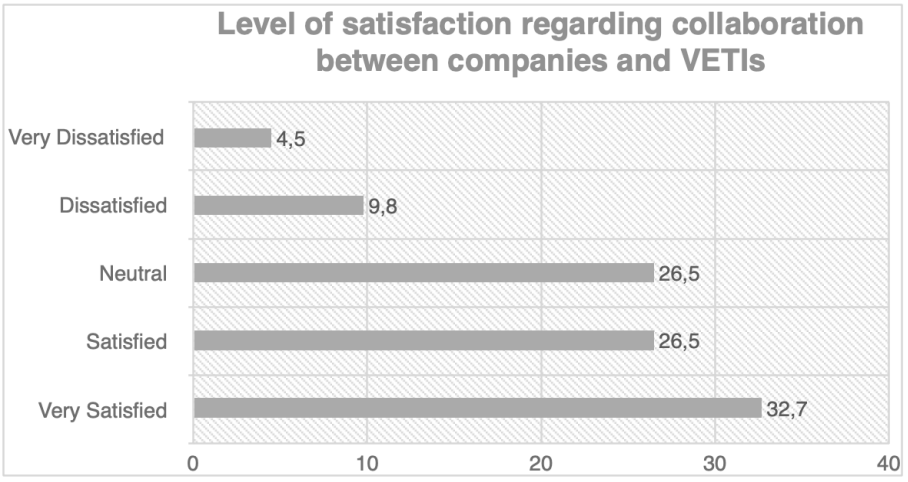


Figure 57. Level of satisfaction regarding collaboration between companies and VETIs

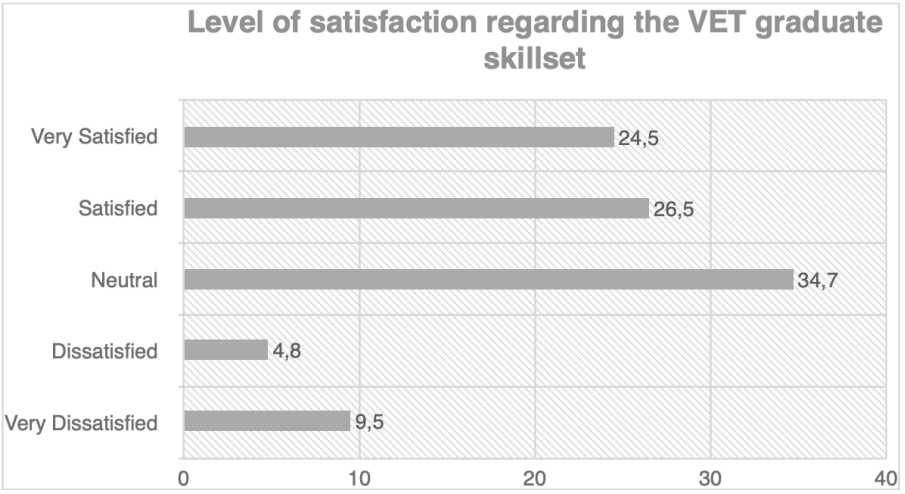


Figure 58. Level of satisfaction regarding the VET graduate skillset

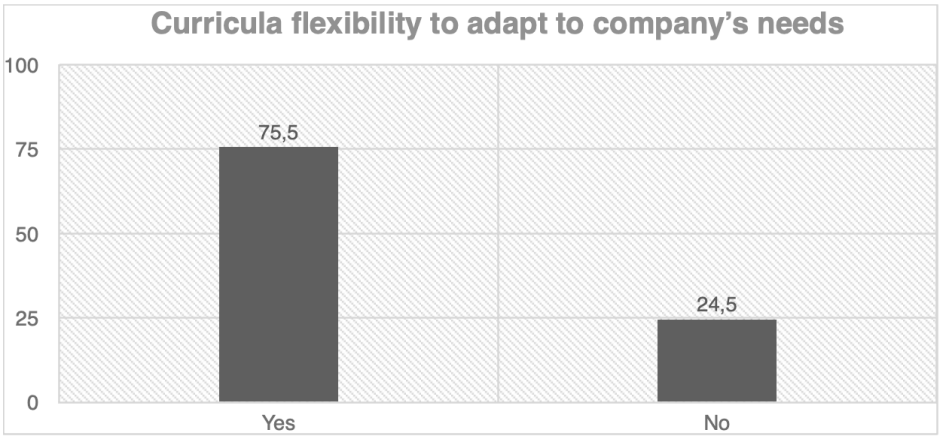


Figure 59. Curricula flexibility to adapt to company's needs

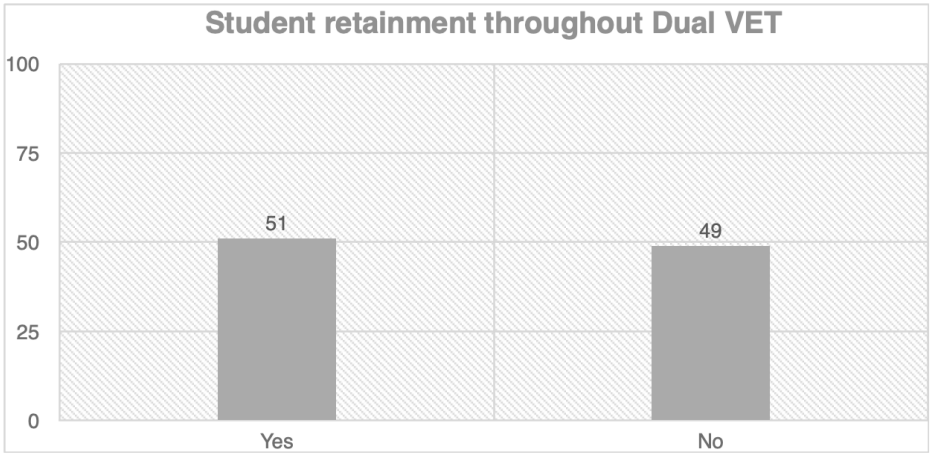


Figure 60. Student retainment throughout Dual VET

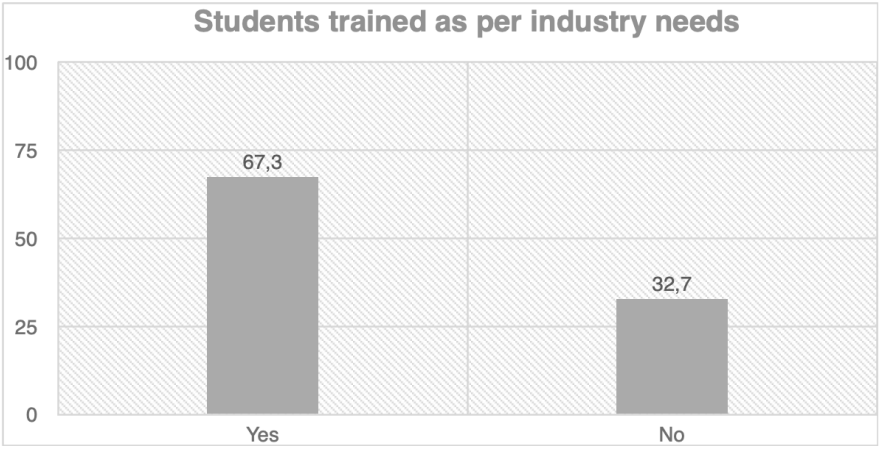


Figure 61. Students trained as per industry needs

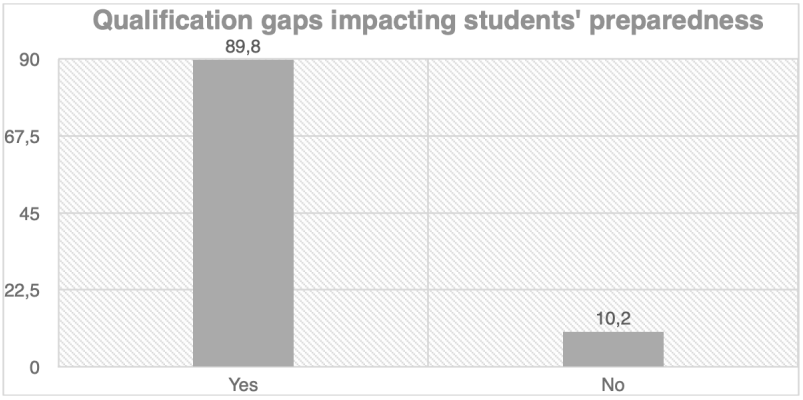


Figure 62. Qualification gaps impacting student preparedness

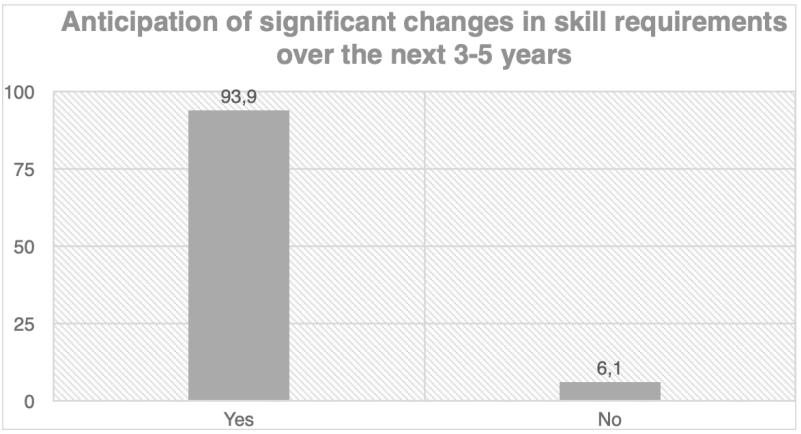


Figure 63. Anticipation of significant changes in skill requirements over the next 3-5 years

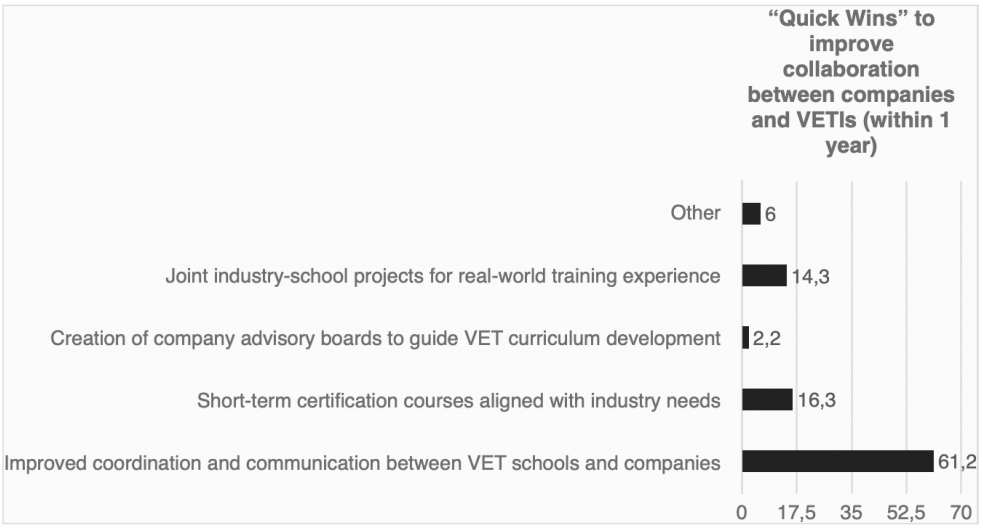


Figure 64. Quick Wins for improvement of collaboration between companies and VETIs

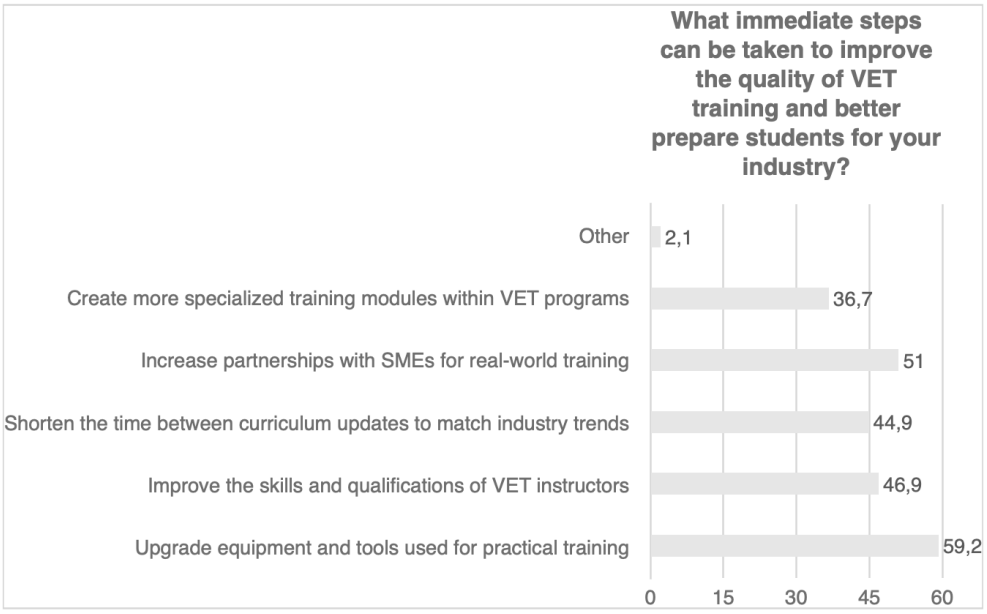


Figure 65. Immediate steps to improve the quality of VET training

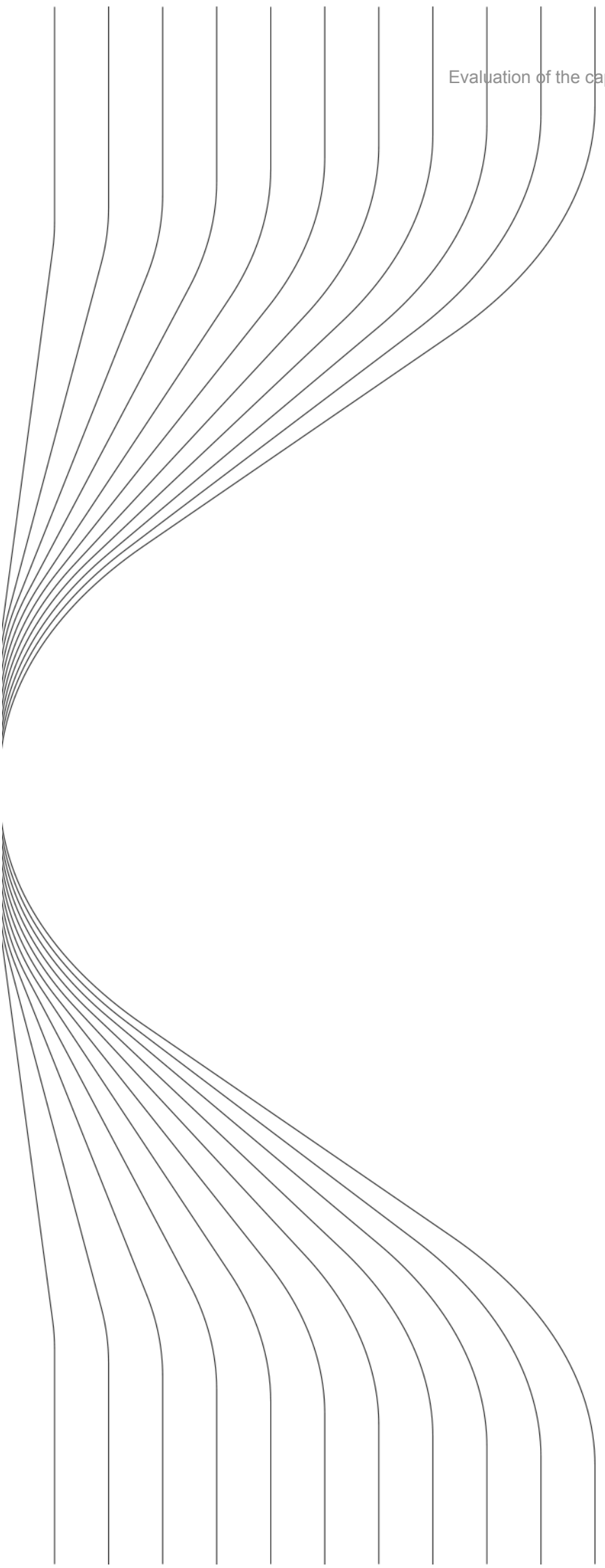
10.3. Annex 3. List of Interviewees and Focus Groups

	Interviews			
No	Interviewee	Institution	Sector	City
1	Avni Gashi	National Qualifications Authority	Institution	Prishtine
2	Avni Syla	Elen Energy LLC	Energy	Prishtine
3	Gani Ismajli	Division for Quality Development and Certification in Kosovo	Institution	Prishtine
4	Besart Krasniqi	Kosovo Chamber of Commerce	Business Association: Energy IC	Prishtine
5	Agim Krasniqi	MESTI Dual VET	MESTI	Prishtine
6	Muhamet Ibriqi	Agency of vocational education and training and adults' educati	Institution	Prishtine
7	Gani Ismaili	Quality Development and Certification department	Institution	Prishtine
8	Besarta Hyseni	Kosovo German Economic Chamber	Business Association: Energy IC	Prishtine
9	Eriola Muhaxhiri	Kosovo German Economic Chamber – VET Department	Business Association: Energy IC	Prishtine
10	Vildane Kelmendi	Cacctus Education	ICT	Prishtine
11	Besart	Kosovo Chamber of Commerce – VET Department	Business Association: Energy IC	Prishtine
12	Venet Tetaj	Don Bosko VTC	VTC	Prishtine
13	Armend Bajraktar	competence Centre Skenderaj	CoC	Skenderaj
14	Edison Berdyna	Ministry of Finance, Industry, and Transfers	Institution	Peje
15	Edison Berdyna	VTC Peje	Institution	Peje
16	Maliq Pireci	Kosovar Association for Renewable Energy and Energy Efficie	Energy	Prishtine
17	Arieta Pozhegu	Kosovo Wood Processing Association	Wood Processing	Prishtine
18	Sinan Gashi	VTC Prizren	VTC	Prizren
19	Nazmi Zogaj	Kujtim Krasniqi School Malisheve	CoC	Malisheve
20	Xhevat Muca	Muça Solar LLC	Energy	Prishtine
21	Lah Nitaj	VET Director MESTI	MESTI	Prishtine
22	Shpend Lila	Innovation Centre Kosovo (ICK)	ICT	Prishtine

Table 2. List of Interviewees

Focus Group Discussions			
No.	Institution	Sector	City
1	UNDP	Development Agency	Prishtine
	STIKK	ICT	Prishtine
	EU Office in Kosovo	Development Agency	Prishtine
	Kosovo Agency for Gender Equality	Gender Agency	Prishtine
	Kosovo German Chamber of Commer	Energy	Prishtine
2	School Kadri Kusari	VET School	Gjakove
	Elen Solar	Energy	Mitrovice
	Muca Solar	Energy	Prishtine
	ICK	ICT	Prishtine
	Jaha	Energy	Prishtine
3	IFF	ICT	Prishtine
	Cacttus	ICT	Prishtine
	MIRECK	Energy	Prishtine
	Initiative for Agricultural Development (	Agriculture	Prishtine
	Mehmet Isai School	VET School	Gjilan
	Hasan Prishtina School	VET School	Mitrovice
4	Abdyl Frasheri School	VET School	Prishtine
	Fan S. Noli School	VET School	Podujeve
	Jonuz Zejnullahu School	VET School	Viti
	Ymer Prizreni School	VET School	Prizren
	USAID IREX	Energy	Prishtine
	IREX	Energy	Prishtine
5	Meister Training Centre	VET School	Prishtine
	Hymeri Group LLC	Energy	Prishtine
	Tafil Kasumaj School	VET School	Decan
	Economic School	VET School	Artane
	Nazmi Zogaj School	VET School	Malisheve

***Table 3**. List of Focus Groups*



Question the answer