

1.3. QUALITY ASSURANCE SYSTEMS IN VOCATIONAL EDUCATION AND TRAINING: A COMPARATIVE ANALYSIS OF THE EXPERIENCES OF THE KINGDOM OF THE NETHERLANDS AND UKRAINE

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This chapter presents a comparative analysis of the quality assurance systems within vocational education and training in the Kingdom of the Netherlands and Ukraine. It examines the distinctive features of the Dutch model, which relies on risk-based inspectorate supervision, substantial institutional autonomy for colleges, and the strategic integration of industry stakeholders through the Foundation for Cooperation on Vocational Education, Training and the Labour Market. The analysis further explores the transformation of the Ukrainian educational landscape through the implementation of European Quality Assurance in Vocational Education and Training standards and adaptation to contemporary crisis-related challenges. The study identifies specific points of convergence between both systems, particularly regarding internal monitoring mechanisms and the assessment of learning outcomes. Furthermore, the research delineates strategic benchmarks for adapting the Dutch experience to modernise the national system – specifically by fostering a culture of self-assessment and strengthening sectoral partnerships. Such measures serve as a critical instrument for enhancing graduate competitiveness and ensuring the sustainable post-war recovery of Ukraine’s national economy.

Keywords: vocational education and training (VET), Kingdom of the Netherlands, Ukraine, comparative analysis, EQAVET standards, quality of education

The contemporary paradigm of vocational education and training (VET) in a globalised world is undergoing fundamental transformations, driven by the necessity to adapt human capital to rapid technological shifts, digitalisation, and the requirements of the “green” transition. In this context, quality assurance (QA) systems emerge not merely as control mechanisms but as strategic instruments to guarantee the competitiveness of national economies and the social resilience of society. The theoretical origins of the quality assurance concept within the European Education Area are inextricably linked to the development and implementation of the European Quality Assurance Reference Framework for Vocational Education and Training (EQAVET), which was formally established by the Recommendation of the European Parliament and of the Council in 2009 (European Commission, 2026a). EQAVET provides EU Member States and partner countries with a flexible toolkit based on a cycle of continuous quality improvement,

comprising four interconnected phases: planning, implementation, evaluation, and review (European Commission, 2026b). This cycle, known as the PDCA model, enables educational providers and systemic regulators not only to record current results but also to identify areas for improvement systematically, building upon an evidence base and the engagement of a wide range of stakeholders. Strengthening a culture of quality within the EQAVET framework also necessitates a transition from quantitative indicators toward a qualitative assessment of education's impact on individual life trajectories and community development. The implementation of this framework requires the creation of robust feedback mechanisms where each PDCA cycle concludes not merely with a report, but with tangible management decisions aimed at modernising infrastructure, updating learning content, and enhancing the professional development of teaching staff. In the modern environment, where knowledge becomes obsolete faster than a full training cycle can be completed, the systematic nature and predictability of quality assurance processes ensure that state and business investments in VET yield the expected socio-economic effects. Consequently, EQAVET serves not only as a technical instruction but as a philosophical foundation for constructing a lifelong learning ecosystem where quality is a shared responsibility of all participants in the educational process, ultimately determining a nation's ability to prosper amidst future uncertainty.

The 2020 EU Council Recommendation on VET for competitiveness, social fairness, and resilience significantly expanded the horizons of EQAVET by integrating quality requirements not only for initial VET (IVET) but also for continuing vocational education and training (CVET) (European Commission, 2026a). The updated framework emphasises learning outcomes, the flexibility of educational pathways, the digital readiness of systems, and the role of teachers and trainers as key agents of quality. To monitor the effectiveness of VET systems at the pan-European level, ten key indicators have been identified, including: the relevance of quality assurance systems, investment in teacher training, participation rates in VET programmes, completion rates, graduate employment rates, the utilisation of acquired skills in the workplace, unemployment rates, the inclusion of vulnerable groups, mechanisms for identifying labour market needs, and schemes to ensure access to training. Each of these indicators serves as a marker of how effectively the educational system fulfills its social and economic mission by facilitating the transition from learning to stable employment (Evangelista et al., n.d.).

The Kingdom of the Netherlands demonstrates one of Europe's most sophisticated VET models, characterised by a high degree of institutional autonomy and deep integration with the labour market. The Dutch system of secondary vocational education (MBO) is based on the Adult and Vocational Education Act (WEB), which grants colleges (ROCs, AOCs) significant freedom in resource management and curriculum development, provided they adhere to national occupational standards. A key feature of

the Dutch approach is risk-based supervision conducted by the Inspectorate of Education. In contrast to traditional models of total control, the Dutch Inspectorate focuses its attention on institutions showing signs of declining quality or financial instability, while successful institutions receive more space for innovation and self-regulation (Eurydice, 2023). This approach stimulates the development of an internal “quality culture”, where responsibility for the final outcome is shared among institutional leadership, teaching staff, and social partners (Inspectorate of Education, 2024).

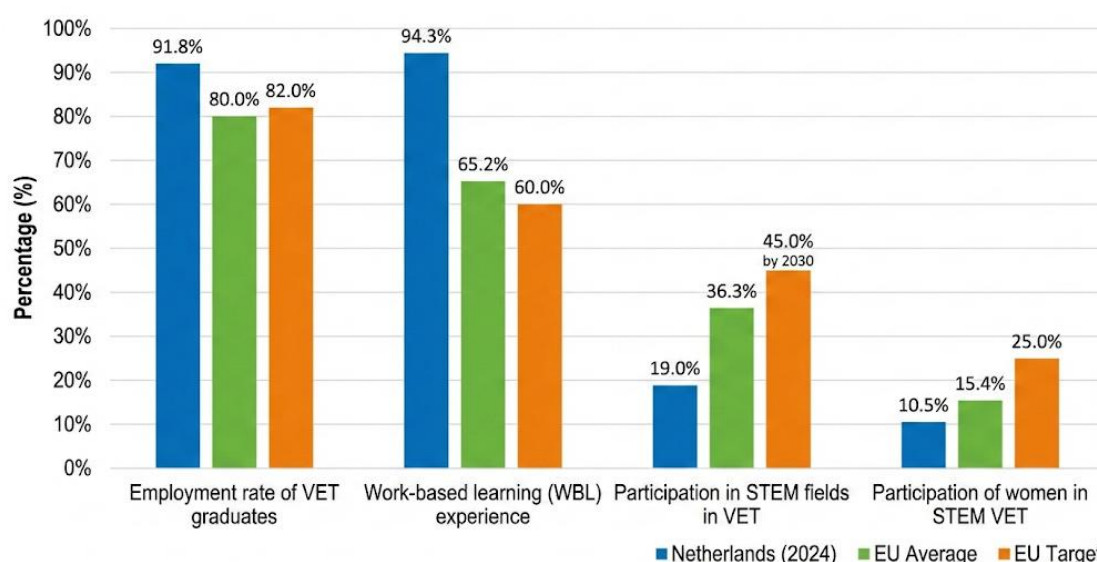
A vital component of the Dutch model’s resilience is the activity of the Foundation for Cooperation on VET and the Labour Market (SBB), which acts as a mediator between educational institutions and industry representatives. Within the SBB framework, occupational standards are developed and constantly updated, allowing for the rapid integration of new digital and “green” skills into the educational process. The oversight system by the Inspectorate of Education subsequently transforms into a multi-level verification of not only learning outcomes but also the effectiveness of process management. The Inspectorate applies a differentiated methodology: institutions consistently demonstrating high quality (rated “satisfactory” or “good” on the national scale) are exempt from intensive inspections, allowing them to focus on experimental pedagogical methods and strategic partnerships. Such a mechanism creates a powerful incentive for self-improvement, transforming quality from an external requirement into an internal value of the educational community, where monitoring graduate success and their subsequent professional trajectories becomes a key evidence-based indicator of success (Inspectorate of Education, 2024).

The organisation of work-based learning (WBL) occupies a special place in the quality assurance architecture, implemented through two primary pathways: the school-based pathway with an internship (BOL) and the dual pathway based on employment (BBL). In both cases, the quality of vocational training is guaranteed through a rigorous accreditation procedure for partner companies conducted by the SBB. Every enterprise hosting a learner must meet established standards regarding safety, the availability of qualified mentors, and the alignment of work tasks with the programme’s learning objectives. This integration into the real economic sector allows Dutch colleges to minimise the gap between classroom theory and workplace practice. Simultaneously, internal quality assurance systems in colleges are based on EQAVET principles, where gathering feedback from learners and employers is a mandatory element of the improvement cycle. The use of Big Data to analyse dropout rates and study duration enables institutions to implement proactive support measures for learners, thereby increasing the overall social inclusivity of the VET system (Eurydice, 2023). Furthermore, the current stage of Dutch VET development is characterised by increased attention to the “Lifelong Learning” concept, which necessitates greater flexibility from

quality assurance systems and the ability to evaluate non-formal and informal learning outcomes. Validation of Prior Learning (VPL) is becoming an integral part of the strategy to enhance human capital mobility, allowing adult workers to certify their competencies and obtain relevant certificates without the need for a full repeat course of study. This creates an adaptive educational environment where quality is measured not only by diplomas but by an individual's capacity to continuously update their professional profile amidst rapid technological change.

The effectiveness of the Dutch model is confirmed by statistical data (Figure 1.2): the employment rate of VET graduates in 2024 was 91.8%, significantly exceeding the European average (80.0%) and the EU target for 2025 (82.0%) (European Commission, 2025a).

Figure. 1.2. Comparative Characteristics of VET System Indicators in the Netherlands and the EU



Nearly all VET students in the Netherlands (94.3%) gain work-based learning experience during their studies, resulting from the coordinated work of the SBB Foundation; this body plays a critical role in the quality assurance system by taking responsibility for the accreditation of over 250,000 companies where students can undertake internships or apprenticeships, as well as for developing and updating occupational standards across nine economic sectors (Cedefop, 2023b). This ensures that VET content always corresponds to current business demands and that practical training occurs in a safe, professional environment under the supervision of certified mentors. Simultaneously, the Dutch system faces new challenges reflected in the annual “State of Education” reports for 2023 and 2024. The Inspectorate notes a worrying trend toward

declining basic skills literacy and numeracy among vocational college students, which potentially hinders their further education and successful socialisation. Moreover, a significant labour shortage persists in STEM fields: only 19% of students choose scientific and technical pathways, which is substantially lower than the EU average of 36.3% (Inspectorate of Education, 2023). In response to these challenges, the Dutch government, together with social partners, signed the “VET Working Programme 2023–2027”, which aims to improve the quality of basic skills, ensure equal opportunities for vulnerable student groups, enhance youth mental health, and stimulate interest in professions related to the energy transition and digitalisation (European Commission, 2025a).

Ukraine, having chosen the path of European integration, is conducting a large-scale modernisation of its national VET system, aligning with EQAVET standards and adapting to the extreme conditions of martial law. The Strategic Plan of the Ministry of Education and Science of Ukraine until 2027 and the new Law “On Vocational Education” (No. 4574-IX), adopted in 2025, identify educational quality as a key priority to ensure national recovery and human capital development (Eurydice, 2025b). The reform envisages a transition to a decentralised management model where significant powers are transferred to regional and institutional levels, allowing institutions to respond more flexibly to local labour market needs and the requirements of internally displaced persons (Leu-Severynenko, 2025). The introduction of institutional audits as a form of external quality assurance, conducted by the State Service of Education Quality of Ukraine (SSEQU), is designed to evaluate not only learning outcomes but also the management and educational processes within institutions. The implementation of institutional audits in the Ukrainian context serves as the foundation for building internal quality assurance systems which, according to updated legislation, must be implemented in every vocational education institution. This process involves not only monitoring curricula but also creating an inclusive educational environment, digitalising management processes, and developing public-private partnerships. A vital component of this transformation is the establishment of Centres of Professional Excellence (CoPEs), which function as innovation hubs where best quality assurance practices are refined, new occupational standards are tested, and vocational educators undergo professional development in collaboration with leading employers. The application of self-assessment methodology, correlating with the PDCA (Plan-Do-Check-Act) cycle, allows Ukrainian colleges and lyceums to transition from a model of passive compliance with state directives to a model of active strategic planning; this shift is critical under limited resources and the need for rapid workforce training to rebuild destroyed infrastructure (Leu-Severynenko, 2025). Orientation toward EQAVET indicators, such as graduate satisfaction levels and the proportion of those employed in their specialisation, enables

the construction of a transparent accountability system for society and donors supporting the reform (Radkevych, 2025b).

Parallel to this, the Dutch experience in addressing the basic skills deficit and stimulating STEM education serves as a valuable guide for Ukrainian reformers, as similar problems are intensifying in Ukraine due to educational losses caused by the war and remote learning formats. The VET Working Programme 2023–2027 in the Netherlands places a particular emphasis on “regional quality agreements”, where educational institutions, municipalities, and businesses jointly invest in developing the competencies required for local economic growth. In Ukraine, this approach is reflected in the creation of sectoral councils and the involvement of employers in curriculum development based on a competency-based approach, which aligns with the National Qualifications Framework harmonised with the European Qualifications Framework (EQF). A significant innovation is the implementation of the dual form of education, where training quality is guaranteed through joint control by the educational institution and the enterprise, minimising the risks of graduate skills mismatching modern technological requirements. Consequently, both countries, despite different starting conditions and challenges, are moving toward creating flexible, human-centric VET systems where quality is not a static indicator but a dynamic process of continuous improvement oriented toward future global labour market needs. Specific attention in harmonising the Ukrainian vocational education system with European standards is devoted to the digitalisation of quality assurance procedures and data collection. The implementation of an Education Management Information System (EMIS) allows for the real-time monitoring of learner educational trajectories, which is a key condition for evidence-based policy. This correlates with the Dutch practice of risk-based supervision, as it enables regulators to identify institutions requiring additional support before crisis situations arise. Combined with an emphasis on the “green” transition, which involves integrating environmental competencies into all occupational standards, the Ukrainian vocational education system is transforming into a driver of sustainable development. According to national reforms in vocational education until 2026, the priority remains not only expanding access to education for vulnerable categories but also ensuring the high quality of this education, as confirmed by internationally recognised certificates and a high level of trust from the international community (Eurydice, 2025b). This creates conditions for Ukraine's full integration into the European Education Area, where vocational education is viewed as the foundation for innovative breakthroughs and social cohesion. The 2024 SSEQU analysis (Table 1.4) revealed several systemic problems requiring urgent resolution: the misalignment of programme content with occupational standards, a funding deficit for modernising Vocational Training Centres (VTCs), and the incomplete transfer of institutions from state to communal ownership (Kravets, 2025b).

Table 1.4. Key Challenges in the Development of the Ukrainian Vocational Education System and Responding Entities

Challenges in the Ukrainian VET system (2024)	Description and consequences	Responding Entity
Suboptimal institutional network	Presence of small-scale institutions with low resource efficiency	MES, Regional Administrations, Tripartite Councils
Labour market mismatch	Training for occupations without regional demand; shortages in critical sectors	Employers, Regional Councils
Outdated facilities and programmes	Learning content fails to meet occupational standards and modern technologies	VTCs, Centres of Excellence
Shortage of teaching staff	Lack of practical trainers with modern industrial experience	VET institutions, Business partners
Disruptions in distance education	Difficulty in ensuring quality of practical skills in online mode during crises	SSEQU (State Service of Education Quality)

The new Law of Ukraine “On Vocational Education” introduces innovative partnership mechanisms, such as Supervisory Boards, which include employers and founders on a parity basis (Leu-Severynchenko, 2025). These boards are granted the right to influence the development strategy of the educational institution, approve financial plans, and initiate audits, effectively transforming the role of business from a passive consumer of labour into an active participant in the educational process. Another important step is the development of qualification centres that conduct independent assessment and recognition of non-formal and informal learning outcomes, which is critical for the rapid retraining of the adult population during wartime. A comparative analysis of the experiences of the Netherlands and Ukraine facilitates the identification of convergence points and specific discrepancies in quality assurance approaches. Both countries are implementing the “Centres of Professional Excellence” model as innovation hubs uniting education, science, and business to solve complex economic tasks. There is also a shared interest in the digitalisation of quality assurance processes: in the Netherlands, this is realised through the “Npuls” programme and the implementation of micro-credentials; in Ukraine, it occurs through the creation of digital educational platforms, online courses, and the modernisation of institutional IT infrastructure (European Commission, 2025a). However, the level of institutional autonomy remains

significantly higher in the Netherlands, where colleges have full responsibility for organising exams and managing “lump sum” funds, whereas Ukraine continues the transition toward genuine financial and academic autonomy.

For Ukraine, the Dutch experience is extremely valuable in the context of developing social partnerships and forming a resilient work-based learning ecosystem. Establishing an institution analogous to the Dutch SBB could systematically resolve the gap between labour market requirements and VET content in Ukraine, ensuring transparent accreditation of internship sites and quality control of workplace mentoring. Developing an internal quality assurance system for vocational education based on self-assessment and reflection is another promising direction for modernising the Ukrainian system. In the Netherlands, self-assessment is viewed not as a bureaucratic obligation but as a tool for strategic dialogue within the institutional team and with its external partners (Köppe et al., 2025). Research indicates that involving learners and teachers in self-assessment processes increases their responsibility for learning outcomes and fosters agency the ability to actively influence the quality of the educational process.

In the context of deepening integration processes, the development of flexible learning pathways and the implementation of a micro-credentials system is of particular importance, becoming a shared vector for VET development in both countries in 2026. The Dutch “Npuls” initiative, aimed at the digital transformation of VET, creates conditions for the recognition of short-term learning modules, allowing specialists to update their competencies rapidly in accordance with the demands of the “green” economy and Industry 4.0. For Ukraine, the implementation of similar mechanisms, as outlined in the MES Strategic Plan until 2027, is not only a matter of economic expediency but also a strategic tool for the social rehabilitation and professional reintegration of veterans and internally displaced persons. Quality in this regard ceases to be a static characteristic of a diploma and transforms into a dynamic portfolio of verified skills, where each educational block undergoes validation via digital platforms, ensuring transparency and trust among all labour market participants. Such an approach requires a radical revision of curriculum development methodology: moving from rigid, long-term standards to modular structures that can be quickly adapted without losing the fundamental quality of vocational training. Simultaneously, a critical success factor for both models is the development of pedagogical leadership and the changing role of the teacher, who in modern conditions evolves from a transmitter of knowledge into a facilitator and designer of the educational environment. In the Netherlands, the shortage of teaching staff stimulates investment in their professional development based on the “professional space” concept, where educators have autonomy in choosing teaching methods and assessment tools provided they meet national quality indicators. In Ukraine, the modernisation of pedagogical education, as envisaged by new legislative acts of

2024–2025, focuses on bridging the technological gap and mastering blended learning tools. Teaching quality becomes a central element of the SSEQU institutional audit, as the level of professional and digital competence of a practical trainer directly correlates with the level of student skill development. Creating joint internship programmes with business for teachers at VTCs and Centres of Professional Excellence allows for the synchronisation of the educational process with real production cycles, minimising the risks of training specialists for “yesterday’s” economy and increasing the overall attractiveness of vocational education among youth. A fundamental basis for ensuring the resilience of these systems in the long term is the transition to data-driven management, which enables predictive modelling of labour market needs and the effectiveness of educational investments. The implementation in Ukraine of automated systems for monitoring graduate employment, similar to Dutch tracking systems (ROA), provides an objective basis for management decisions at regional and institutional levels. This allows for the realisation of the “performance-based funding” principle, where quality directly influences the volume of state support, incentivising VET institutions toward active competition for applicants and employer trust.

In summary, it can be asserted that quality assurance systems in vocational education in the Netherlands and Ukraine are evolving toward greater flexibility, digitalisation, and close cooperation with the labour market, guided by EQAVET principles. For Ukraine, the successful implementation of European standards, combined with the adaptation of best Dutch practices, provides the foundation for creating prestigious and effective vocational education capable of ensuring sustainable post-war recovery and a high quality of life for citizens. A key success factor in this process will be not only legislative updates but also the building of trust among all participants in the educational ecosystem, where quality is recognised as a shared value and responsibility. This will enable Ukrainian graduates to be competitive in both domestic and European labour markets, facilitating Ukraine’s integration into the single EU educational and economic space. Thus, the transformation of vocational education in both countries occurs under conditions of high uncertainty, necessitating that quality assurance systems possess “skills foresight” capabilities. The Dutch “Lifelong Learning Catalyst” model and the Ukrainian initiative (DECIDE) demonstrate the importance of regional ecosystems, where vocational education institutions become hubs for community development and economic growth. Integrating these efforts at the national level contributes to the resilience of vocational education against any global challenges, turning it into a powerful engine of societal progress. The prioritisation of investment in pedagogical staff, digital infrastructure, and the inclusivity of the educational environment remains a constant for the successful development of vocational education in the long term.